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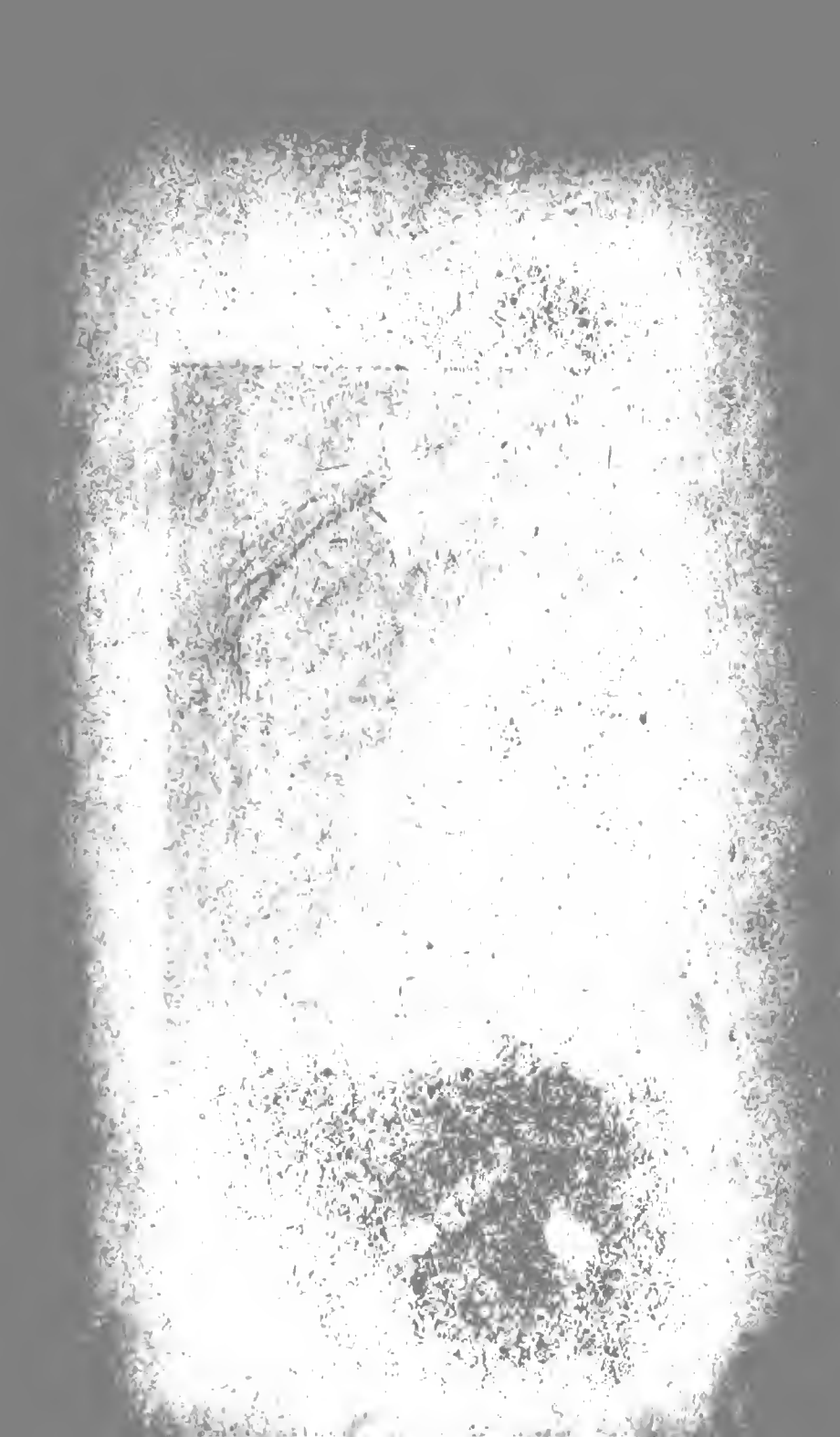


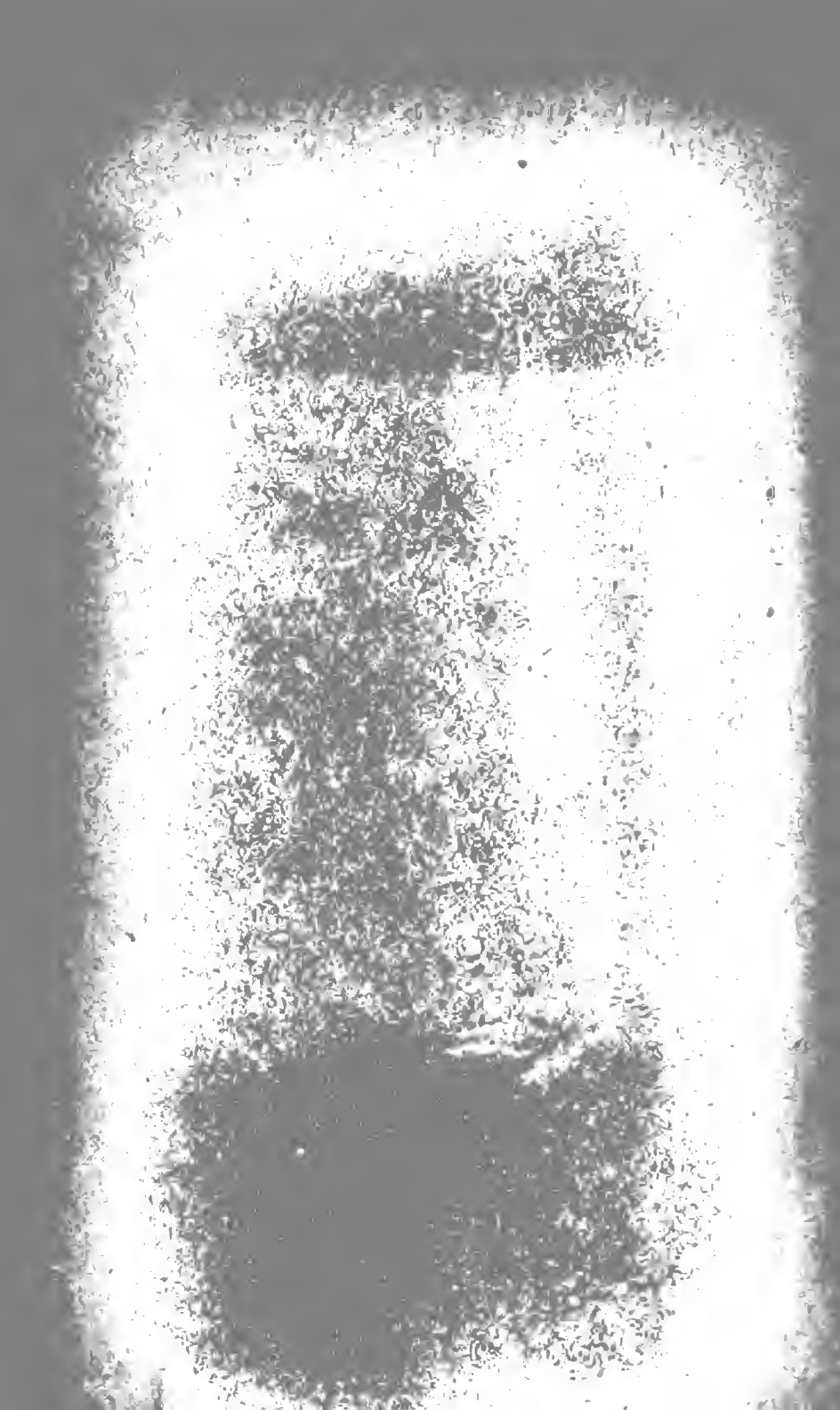
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Quantum ego quidem video motus morbos fere omnes a motibus in systemate nervorum ita pendent ut morbi fere omnes quodammodo Nervosi dici queant."—CULLEN'S NOSOLOGY: BOOK II, P. 181—EDINBURG ED., 1780.

THE
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No. 1.

PRINCIPLES OF CRIMINAL ANTHROPOLOGY

BY ARTHUR MACDONALD,

Washington, D. C.

Honorary President of the "3rd International Congress of
Criminal Anthropology," of Europe.

CRIMINAL anthropology is a recent line of research. It includes the study of man mentally, morally and physically, and necessarily depends on the results of many sciences. It is therefore distinctively *synthetic* in character. Criminal anthropology affords more opportunities for persons of ability to carry out the highest ideals than any other branch of inquiry.

The following are some of the principles of criminal anthropology, or what might be called its platform:

1. Degrees of criminality should be estimated according to detriment to the community. From this point of view, international crime, or war, is by far the greatest of all crimes.

2. History is mainly history of the abnormal, especially war and one of the objects of criminal anthropology is to lessen and prevent war. Montaigne says: "It is more barbarous to kill a live man, than to roast and eat a dead one."

3. The greatest of all studies is man, which is based upon the individual, the unit of the social organism.

(1)

4. If the study of civilized man is to become a science, it must depend upon investigation of large numbers of individuals, and the method should be the same for all classes, if we are to distinguish between the normal and abnormal.

5. The best method of study for criminal anthropology is that of the laboratory in connection with sociological data.

6. The thorough investigation of ONE human being with the means at the disposal of science, would make a volume.

7. All facts about human beings are important from the scientific point of view, whether those facts be immediately available or not.

8. In studying man, names are unnecessary and statement of facts is not criticism, for science is absolutely impersonal.

9. Opinion is valuable according to knowledge, especially first-hand knowledge, and science is common sense condensed. Yet

10. The foundation of science is the love of truth for its own sake.

11. All that is diseased is abnormal, but not all that is abnormal is diseased; thus a hand with six fingers is abnormal, but not necessarily diseased.

12. We must study the normal to comprehend the abnormal, for

13. When the normal acts in an unsuitable way, or at the wrong time or place, it may become abnormal. The fundamental conception of the abnormal is EXCESS of the normal; but

14. The difference in degree between the normal and abnormal can be so great as to result in a difference of kind; just as when two fluids reach a certain amount, a precipitate is formed which is very different from the ingredients from which it was deposited.

15. Abnormal man may be abnormal in the right direction, as genius man, talented man or statesman; or in the wrong direction, as criminal, pauper or defective

man. It is all MAN, and the study of these different classes might be called the anthropology of the living as distinguished from prehistoric anthropology.

16. The study of medicine is the study of the future. To know the geography of the body is more important than to know the geography of the world. Know thyself.

17. Of all forms of abnormal humanity crime is nearest the normal; the study of criminals therefore, is mainly the study of normal men, and knowledge thus gained may be generally applicable to the community as a whole. Therefore,

18. The prison and reformatory can serve as a humanitarian laboratory for the benefit of society. As the surroundings of the inmates are similar, conditions for scientific research are favorable.

19. As in machinery we first repair the parts out of order, so in society we first study the criminal, pauper, insane, feeble-minded and other defectives, all of whom constitute about one per cent of the community. But,

20. Why should we allow one per cent of society to cause so much trouble and expense to the remaining ninety-nine per cent, crime alone costing more than one-half million dollars annually? It is mainly because of neglecting the young, where study of man should begin. For,

21. There is little hope of making the world better, if we do not seek the cause of social evils at their foundation.

22. No evil can be PERMANENTLY lessened without first finding its cause. There is probably no ONE cause of anything, but a chain of causes.

23. Drunkenness is not only one of the main causes of crime, but one of the greatest enemies of humanity, because it brings suffering upon so many innocent people.

24. We cannot be tempted to do wrong unless there is something in us to be tempted; that something is a part of ourselves as distinguished from our environment; therefore,

25. The comprehensive study of man requires investigation of both individual and his surroundings, for the environment may be abnormal rather than the man.

26. Cranks or mattoids who attempt the lives of prominent persons are very important on account of the enormous injury they can do to society. They therefore should be studied most thoroughly.

27. Just as the physician studies his patient in order to treat him properly, so one should study the criminal.

28. The exhaustive investigation of a single criminal illustrates just how and by what steps both environment and inward nature lead to criminal acts. Human beings are much more alike than unlike.

29. Criminals, paupers and other defectives are social bacilli which require as thorough scientific investigation as the bacilli of physical disease.

30. No one should be held responsible for the first fifteen years of life, nor is any one accountable for the tendencies inherited from ancestors. As the die is usually cast before adult life arrives, responsibility is most difficult to determine, and is often a minimum quantity. Therefore,

31. In judging human beings we should emphasize their excellencies rather than defects. As has been said, to know all is to forgive all; yet

32. Every person dangerous to property or life, whether insane, criminal or defective, should be confined, but not necessarily punished.

33. The determinate sentence permits prisoners to be released, who are morally certain to return to crime. The indeterminate sentence affords the prisoner an opportunity to reform without exposing society to unnecessary danger but,

34. Society has no right to permit prisoners to be released who will probably return to crime; for,

35. Where it is a question between justice to the individual or justice to the community, the community should have the benefit of the doubt.

36. The prison should be a reformatory and the reformatory a school; the object of both should be to teach good mental, moral and physical habits; both should be distinctly EDUCATIONAL. There should be a minimum temptation to do wrong and a maximum encouragement to do right.

37. Institutions for reforming human beings should have the conditions as similar as possible to surroundings outside, so that when inmates are released they may adapt themselves more easily to society and not become misfits.

38. Every one has the right to a proper bringing up; and,

39. The time has come when we should study a child with as much exactness as we investigate the chemical elements in a stone or measure the mountains on the moon.

40. One purpose of criminal anthropology is, through knowledge gained by scientific study, to protect the weak, especially the young IN ADVANCE, before they have become tainted and fallen; not locking the barn door after the horse is stolen.

41. The treatment of young criminals should be the prototype for treatment of adults, and procedures against them should have as little publicity as possible.

42. Publication in newspapers of criminal details is an evil to society on account of the power of imitation. In addition it makes the criminal proud of his record, develops the morbid curiosity of the people, and it is especially the weak who are affected.

43. Place confidence in the so-called bad boy, awaken his ambition and teach him to do right for right's sake.

45. Put the criminal upon his honor. A criminal once said, "If they will not believe me when I tell the truth, I might as well tell lies."

46. Nothing will hinder development of the young more than the prospect of having plenty of money and no necessity to work. Idleness often leads to crime.

47. It is more important to know what is good than what is true; for morality is more precious than knowledge.

48. Increase in intellectual development is not necessarily connected with increase of morality, and education which trains the mind at the expense of the will is a questionable education.

49. The longer we live, the more we appreciate the average honest man, as compared with the dishonest talented man.

50. To any observer of life, the impracticability of pessimism and the advantages of optimism are evident. It has also been estimated that,

51. Most of our thoughts, feelings and acts are indifferent; but of those remaining, about three-fourths are pleasurable and one-fourth painful, indicating more pleasure than pain in the world.

52. Act as thou wouldst act, if all the consequences of thy act could be realized at the moment thou actest.

WHAT IS EPILEPSY?

BY DR. H. C. KEHOE,

Superintendent Kentucky Institution for Feeble Minded
Children, Frankfort, Ky.

THE world is full of epileptics, there being at least one to every four hundred of the population, yet there is not enough real and tangible information upon this important subject to make a good essay for a county medical society.

Yet many who have suffered with this dread disease have risen high in the halls of fame while still carrying the blight of this scourge.

Napoleon was an epileptoid epileptic, and if history is authentic, but for a convulsive suspension of consciousness on the morning of the battle of Waterloo, who knows but the map of the world might have been changed.

President Roosevelt was born a delicate child, with a tendency toward tuberculosis, but wise parents kept him in the far west when not in school and this rugged life developed one of the greatest minds of modern times, and all dyscrasia was removed by safe and sane hygiene.

Michael Montaigne, who was able to read French novels at eight years of age and mastered the Greek language at the age of eleven and was professor of Latin at Oxford at the age of twelve years, and the greatest master of language except Shakespeare, was a delicate child and always a sufferer, dying at the age of fifty-six from a kidney trouble—perhaps Bright's disease.

Charles Darwin suffered from migraine and other troubles and said but for these conditions, which were ever with him, during his life, he would have accomplished greater success as an author and scientist.

I might mention many other notable cases of sick men who have achieved a large success in life notwithstanding inherited dyscrasia, and not a few would be among the epileptics.

I am inclined to think all inheritance of disease is preventable and will be when medical science shall become more of a fixed science, and more rapid progress shall have been made along all lines affecting the *vis medicatrix naturae*.

We are still stumbling, and as one of the greatest medical thinkers of his time succinctly stated: "They proceed to draw conclusions from these deviations regarding the invisible process of change going on in the inward structure of the diseased human organism, and shaped these conclusions into a fanciful picture which theoretical medicine mistook for the *prima causa morbi*; also for the proximate cause of disease, the inner nature of disease and, in fact, the disease itself, forgetting the axiom of common sense, that the cause of a thing or event cannot be the thing or event itself."

We have had epilepsy to deal with throughout the centuries, yet there is no well defined pathology or etiology dependable up to the present time. In fact, so limited is the information regarding this important subject that every man is forced to write his own pathology and etiology on the subject of epilepsy in all its various phases, and they are many.

Gowers says: "Forty per cent is due to heredity." Starr says: "Heredity is the most potent predisposing cause." Turner, in private practice, gives fifty-one per cent as hereditary. Vorkastner says: "In the overwhelming majority of cases heredity is a constitutional, neuropathic predisposition on which epilepsy develops." Church, Kraepelin and others confirm the hereditary tendency.

Studies by Weeks, Davenport, Rosanoff and others tend to show that epilepsy is a mendelian recessive, closely related to feeble-mindedness because of some lack of some factor which determines nervous stability.

I do not think heredity plays any greater part as a causative factor in the production of epilepsy than does tuberculosis in the parents. In fact we do not inherit either one, but we do inherit the dyscrasia, or morbid state of the constitution, or a thing relating to the disease but not the disease *per se*.

Epilepsy is often referred to as congenital, or from birth. Or connate, that is, congenital or from the same source.

We know it is cerebro-spinal, and involves the brain and spine. There are involved forty-three pairs of nerves—twelve cerebro-spinal and thirty-one spinal. During a paroxysm cerebration is always marked, and the cerebrum is affected to such an extent that reasoning power is lost, while the cerebellum, or posterior-inferior division, involving sensory nerve connections, becomes very active. The brain being passive and the sympathetic nerves coming into sudden and unexpected explosion, the entire body through the efferent nerves comes under control of the spinal units and all the muscular action becomes sphincter, while volition is held in abeyance, thus causing jactitation and irregular movement of the body in contortion, but there is no pain or suffering because afferent nerves are inhibited. This condition may last through one paroxysm or ninety continuous or consecutive spasms executed without consciousness.

Now what is it that induces the convulsions? I find from experience that nearly all epileptics are gormandisers, and, reasoning by induction, it is evident that there must be more or less of an auto-intoxication due to bacterial origin. We know that epilepsy is a nervous functional disease, and when an organ or organs do not functionate nature becomes disorganized and disease results. Yet we find nature constructive under any and all circumstances and can never be wholly surprised

or made absolutely inadequate. By plasmodium, or the ultimate vital unit and the plastic or formative energy, she immediately comes to the rescue with sufficient vital units from the blood current to relieve the most desperate conditions with plasomogen. When nature is insufficient, or in extremity, death usually ends the agony. Of course it is understood we refer to grave grandmal, or true epilepsy, as all other forms are light or transitory.

As to how much infection is cumulative before the convulsion and how much during the continuance of the paroxysm is altogether problematic, but that it is the main factor is the important conjecture I desire to make known. In this declaration I am treading on new ground and blazing the way for further investigation. We also have sympathetic and spontaneous or accidental epilepsy, where exciting causes are not included in the above idiomatic form.

Psycho-epilepsy is sensory, or imitative, and can be readily removed by the proper psychological treatment, and, for this reason, epileptics should be segregated.

Petitmal, or mild cases of epilepsy, are curable when properly studied and all causative forces removed and symptoms eliminated.

Grandmal is the true epilepsy and the prognosis gives but little hope of a permanent cure. I do not report these cases till one year has elapsed from any recurrence, which I consider a fair test looking to permanent relief.

The diet in these cases is most essential, as it is in all minor cases. The most dire results come from over feeding and improper diet.

I deprecate the use of bromides on account of the systemic drug effect, of injudicious use which is often more to be dreaded than the disease itself.

The moral tendencies must be looked after with the greatest scrutiny, as onanism in a patient affected with mitior or grandmal will most surely result in imbecility. The exhaustion due to both conditions is so deteriorating

that the most robust constitution is soon a wreck, both mentally and physically.

Our Institution is making some progress in the treatment of these cases of epilepsy, but constant attention is required that each case be studied separate and apart as to its peculiarities and idiosyncrasies. There are no specifics and each case will likely require a different remedy according to the symptomatology.

What is needed most is for the various states to have separate colonies for the care and treatment of the epileptics.

The State Board of Control, of Kentucky, are wise and practical men of long experience, but they have been deterred from a progressive course because hampered by lack of funds, but it is hoped the next Legislature will respond generously, in a financial way, that this work may be given an impetus in conformity with enlightened methods of handling this very important branch in our state institutions.

TWO DREAMS.

BY MEYER SOLOMON, M., D.

Chicago.

I surely need offer no apology for the presentation of dream analyses. It is a subject so fascinating, so interesting and so valuable in its results, that we find it holding the attention of many students of psychology, normal and abnormal, in these days of psychoanalysis. Discussion and controversy are rife as to the fine meaning and interpretation of dreams, and this is of decidedly practical value because of the importance of dream analyses in and the intimate relationship of dreams to various associated or allied states of consciousness, normal and abnormal.

I am presenting here two dreams which I have selected from a fair number which I have gone over and analyzed. These dreams were selected because of the accuracy in detail, the clearness with which certain basic principles in dreams are portrayed, and, further, because of their significance in the light of the Freudian method of dream analysis and interpretation.

The two persons whose dreams are here given are very briefly described below, and, as will be seen, they come within the range of mentally normal individuals.

The method employed was that described in a previous paper. This method will not be described here more fully than to say that it consists of ordinary conversation in the waking state, with introspection, concentration of the attention and reflection on the part of the patient, under the guidance of the physician or analyst.

My object in presenting these two dreams can be stated very briefly. The dreams seemed to me to be worthy of presentation because they were given to me in such detail and with such accuracy, the analyses are reliable and fairly complete, the meaning of the dreams is easily appreciated and is indicated with great clearness, and there is much food for thought for those who believe in and analyze dreams according to the Freudian theory and from the Freudian standpoint, as well as for others interested in the general problem of the meaning of dreams.

FIRST DREAM.

Miss R. G., a young lady of twenty-three, suffering from no psychopathic illness, but always of a somewhat hysterical trend, as evidenced by the fact, one among many others, that two years ago, following a severe emotional shock, she had an hysterical upset of four days' duration, had the dream here detailed. It may be added that the dreamer frequently has terrifying, horrifying dreams, that like many others, she is afraid to be alone in the dark, and has a generally developed, exaggerated fear-defense reaction. I shall not here present a characterological study of this young woman, nor shall I here discuss the genesis and evolution of the fear-defense reaction in her particular case, since a recital and understanding of these is not essential for an intelligent presentation of the analysis and interpretation of the dream. I may say, in parenthesis, that I have made a study of this patient from this standpoint, including in this study a fair number of her dreams, but there is nothing tangible to support the sexual significance or basic source of origin of this fear-defense reaction. Fear is an instinct *per se*. However, this study is not required for an understanding of the following dream.

DREAM: Miss R., her brother B., and her mother were quietly spending an evening at home. Suddenly somebody out in the hall-way was heard trying to open the dining room door, which was the entrance to the flat in which the family lived. They rushed to see who it was. B. opened the door part-ways and saw at once

that it was a burglar. Thereafter B. held the center of the scene. The mother was still present but held a position far off in the distance, on the outskirts, as it were, of the scene which presented itself to the patient's mind. Miss R. now dropped entirely out of the scene. She had become merely a spectator, as is the case so frequently in dreams. The burglar was making desperate efforts to force his way into the room. B. was endeavoring to do his utmost to shut the door and turn the key, which was, as usual, projecting from the key-hole on the dining room side of the door. B. began shouting to his mother to bring a chisel or some instrument or other to help fasten the door. It now seemed that the door was coming down, that B. was bravely supporting it and that he was shouting loudly for a chisel wherewith, so she thought in her dream, to screw the door hinges into their places and so keep the door from coming down.

At this point Miss G. was awakened by B.'s knocking at the door. It was B.'s mother and not his sister G. who came and unlocked the door. When B. came into the room Miss G. awoke because of the noise occasioned thereby—the knocking at the door, her mother's getting out of bed to unlock the door, and the conversation in a fairly loud tone which followed in the dining room. Miss G. at once recalled the dream, told it to her brother and mother, and then put it in writing substantially as recited above, without extended explanations or efforts at analysis and interpretation.

ANALYSIS: B. could not recall just how long he had waited outside the door before he was admitted, but, when questioned by Miss G. immediately after its occurrence, he was certain that it was a very short wait—perhaps one, two or three minutes. Miss G. believes that the knocking of her brother really roused her from her sleep and occurred at the end of her dream. But since things take place with such lightning-like rapidity and brevity in dreams, it may very well be that the knocking first started the dream on its way and that, the subsequent action in the dream being very rapid, she might

have had the whole dream before her brother was admitted into the room, and that finally she awakened with the increased noise. However, the fact that it was the mother and not Miss G. who finally got up and unlocked the door, and the further fact that Miss G. did not awaken fully until after B. had been in the room for one to three minutes, according to the estimate of Miss G.'s mother and brother, show that the young woman had been sleeping fairly soundly.

Now, it so happened that B., who generally came home at a rather late hour—about twelve o'clock midnight—because he was employed evenings, was expected about the time Miss G. had this dream. Another brother, who also generally came home at a late hour, had not yet arrived. The family generally waited for their return, especially for the return of B. who was very punctual, reliable and dependable, before retiring with a feeling of safety, and with a mind free from anxiety or expectation. On the particular evening on which Miss G. had this dream she had fallen asleep, while dressed, on the couch in the dining-room. Her mother had made things safe by turning the key in the latch of the dining-room door, which, as above stated, was the entrance to the flat (the family had an apartment on the second floor—one flight up.) This she did, although neither B. nor his brother had as yet returned, in order to feel a greater sense of security.

It would be pure, individual speculation on my part to attempt to tell how the association of ideas, which finally led up to the dream, was initiated, or what these thoughts were. But it may have been that thoughts of the expectation of her brother's return, his entrance into the flat by the dining-room door, thoughts of the possible entrance of burglars, etc., may account for the final initiation of the dream, in which, also, the brother's knocking at the door may play a part. The patient herself was unable to give me any assistance here, since she could not recall the trend of associations, if she had had any.

Then comes the dream as related above.

The line of association is quite plain—so much so that I feel that it is unnecessary to spend any time in indicating this. The experiences detailed in the dream are such as might occur in daily life, and the change of scene from trying to force a door in order to keep out burglars to that of calling for aid in fixing the door in place is quite easily understandable—by association of ideas and the investing of the first scene (bearing one's weight against a door) with a significance (that of supporting a fallen door) justified by the range of probabilities as determined by more or less universal experiences or knowledge.

But I shall say a few words in further explanation of why this girl should have dreamed about the door, the key and burglars. For a few days preceding the day on which Miss G. has this dream, B. had been talking a great deal about the key for the bath-room. This key, it seems, had in some way disappeared and could not be found. B. had repeatedly complained about this. He had asked again and again where the bath-room key could be, how it was lost, who had lost it or misplaced it, if it was lost why was not another key gotten at once since it was absolutely necessary to lock the bath-room door on the inside when one was using the bath-room, especially if visitors should come to the home.

Furthermore, two nights previous, Miss G.'s father had been unable to find the key for the dining-room door, and he was very much angered and upset thereat, and had been harping upon this subject for the past two days. Moreover, the second brother mentioned in this analysis had, for reasons which need not be here detailed, been coming home late at night for some time. He had no door key. If the door to the flat was locked, as it sometimes was for safety's sake, he had to knock and pound away at it and would thereby awaken the entire family. If, on the other hand, the dining-room door was left unlocked, so that he could enter the home without having to awaken the others, the various members of the family, particularly the daughter and mother, always

had the vague fear that there was the possibility that a stranger, generally conceived of as a burglar, might enter. As a matter of fact, whenever the brother just mentioned and B. (both of whom had been coming home late almost nightly) entered the dining-room, if the mother or Miss G. were awake, they would invariably call out and ask "Who is it?" or "Who is there?" Nor did they feel assured of safety until a satisfactory reply in the familiar voice of one or the other of the two brothers had been made and was recognized by them. Thus the possibility of burglars entering the flat was always more or less present in their minds at bedtime. So it is with many people, except that here the reasons for an exaggeration of this more or less normal or frequent feeling or idea are clearly seen.

There are, of course, many other experiences in the past life of Miss G. which were of a more or less similar or allied nature. Many of these were unearthed, but I feel that it is not necessary to enumerate all of these, since it would lengthen this analysis to an extreme degree and the most to be gained by such a recital is the demonstration that there were perhaps certain factors or experiences in the past life of this young woman which were of a similar nature, which were centered about the same or other instincts and which perhaps tended to exaggerate and readily bring to the surface this reaction, or which had some share in the determination of same. Even though many such experiences be of very ancient origin (early childhood or even infancy), no cause-to-effect relationship between the early and later experiences would thus be established. Moreover, in the cause here reported, the recent events were quite sufficient in satisfactorily explaining the dream. It may be added that the past life history would not show that a reaction of the sort present in the dream is necessarily always or most usually related to the sexual instinct. I may say also that I have gone over the various elements of the dream and their possible sexual association or symbolization—such as the relation between brother and sister,

the significance of the bath-room, (which is bath-room and toilet-room combined,) the possible signification of the key, chisel, etc.—but I find nothing to support any particular sexual meaning anywhere in the dream.

INTERPRETATION: There is here a fear-reaction dependent upon the motive of self-preservation. I know very well that it may be contended that, especially in young women, fear of the sort mentioned frequently has certain sexual associations or sources of origin; but, however true this may be (I believe it to be true in most cases, even in this young woman), yet in this particular dream in question no such significance can be found.

It may be mentioned in passing that we do not find in this case any tangible support of the Freudian theory of the content or trend of most dreams.

The pleasure motive and wishfulfillment can be conceived of as being the motive or energetic source of origin of this dream only if we view the fear as being the obverse of the wish for freedom from danger of attacks or marauding by burglars.

Associated with the satisfaction of the instinct or motive involved (which is that of self-preservation, using the term in a broad sense) there is a feeling of pleasure. It may be mentioned that Putnam¹ would classify such associated or correlated feelings of pleasure as being of a sexual nature, thus viewing all emotions and feelings as sensual and sexual. With this conception, however, as I have stated elsewhere,² I cannot agree, since, although all pleasurable feelings are allied to the sexual, they cannot because of an imagined similarity or relationship, be so classified or designated. Moreover, we are no more justified in viewing all the motives, feelings and emotions from the sexual standpoint, than we would be, were we to view the sexual impulse from the standpoint of the antecedent, ontogenetically and phylogenetically older im-

1. Dream Interpretation and the Theory of Psychoanalysis. *Journal of Abnormal Psychology*, April—May, 1914.

2. Reply to Dr. J. J. Putnam's paper. See *Journal of Abnormal Psychology*, June—September, 1914.

pulses, yearnings, trends, instincts, motives, feelings or what not. On the contrary, we would be more justified in this latter viewpoint, because even according to the Freudian psychology, that which is older in order of appearance and in time of development and evolution, being thus of relatively ancient, infantile or archaic origin, should be the foundation upon which we should build and classify. One could discuss this problem from many standpoints—biogenetic and biologic, the origin and nature and kinds of pleasure and others—but I shall not digress to such an extent at this time. It is enough for me to know that even though the fear of burglars with its disagreeable psychophysical state is the reverse of the wish for safety (self-preservation) with its agreeable or pleasurable psychophysical bodily condition (and it may be argued here, too, that it is no more logical or rational to view things exclusively from the wish standpoint than it would be to view them from the fear standpoint, but that both tendencies should receive due recognition—a statement with which Freudians should agree, if they believe in the theory of psychical ambivalence or ambitendency, as laid down so clearly by Bleuler)—even if it be granted, I repeat, that the unpleasant fear of danger is but the reverse of the pleasurable wish for safety, a sexual connotation or significance cannot possibly be established by any sound or fair methods of logic or reasoning.

It may be added also that the fear of burglars entering the home, may lead one to inquire concerning why the home with all its associations should excite such a reaction. The reason for this general fear of burglars was discussed above, and if, to satisfy the Freudians, the investigations were made absolutely thorough and almost never-ending, I could here recite, for pages and pages, the life experiences of this young lady, with all possible complexes or memories, which could be evoked by direct association or by forced symbolic thinking, taking as starting points the mother, the brother, burglars, key, door, latch, hole and so on *ad infinitum*. I

have unravelled a great portion, if not most, of the patient's life history which seems worth while, but I find it to have no cause-to-effect or other relationship to the persons, objects or scenes I have mentioned. Association and analogy do not prove to me that there is any true, valid significance from the standpoint of the original stimulus, idea, person or scene, to be attached to that which we later unearth (although great intimacy and relationship may of course exist between them), except that they are related to the same or different instincts or motives; which is just what we should expect, inasmuch as all experiences, all habits, all complexes, physical or mental, conscious or unconscious, are built up about our instincts as nuclei.

I shall not carry this analysis and discussion any further, since it would lead us far afield and many points at issue would have to be discussed as we proceeded, but I believe I have gone far enough in the analysis and interpretation of this dream to show that the Freudian school has made the serious mistake in many of their analyses and interpretations of reasoning by analogy and of proving by *post hoc ergo propter hoc*.

I appreciate that one could very well build up a beautifully and imaginatively constructed interpretation, based on sexuality, symbolism and loose reasoning, to show the (possible) sexual significance of key, lock and the other objects, persons or scenes, but in such a *pseudologia fantastica* one would be living in one's own world or conception of things, with false viewpoints, set dogma and distortion of facts, and one would be reading certain preconceived or fancied meanings into things which were something entirely different, these interpretations being the result of the investigator's individual interpretation, or the result of words or ideas which the patient has been led to say or express, having had forced upon him, perhaps against his will, a certain way of looking at things, a certain attitude. He has been shown how to read into dreams the investigator's meaning, whether or not this interpretation may seem to him logical or

well-founded, and it may even be that he has been convinced by the physician or he has convinced himself by slow degrees that the standpoint of the investigator was at first remotely possible, then quite possible, then probable, then most probably true, next true and finally positively true, wonderful and inspiring.

I have not attempted to point out the various mental mechanisms which can be seen in this dream, but have devoted most of this discussion to a consideration of the content and motive, rather than of the mental processes of the dream, for, in my opinion, it is the content of dreams and of other mental states which is the main source of disagreement between the members of the Freudian school and their opponents.

After an impartial analysis of this dream and of this dreamer's life history, I can find no evidences of repressed "unconscious" tendencies or wishes, of symbolism or sexuality (in the usual Freudian sense), of manifest and latent content (these terms being used in the Freudian sense of distortion by symbolism and secondary elaboration). By no manner of interpretation can this dream be said to be a wishfulfilling dramatization, nor can it be said to arise on a basis of repressed, long forgotten, infantile, unconscious sexual desires or tendencies.

ANOTHER DREAM.

Mrs. C. S. is a woman of 65, mother of six grown-up children, three of whom are married, the other three being of marriageable age but still single and living at home with their parents. The patient has superficial arteriosclerosis and has shown symptoms of cerebral arteriosclerosis (attacks of headache, vertigo, of syncope and of an apoplectiform nature.) Further development of the present and past history will be omitted in this place. Mentally she comes within the normal range, although she was always a nervous woman and presents many other characteristics of an individual nature. She presented me with the following exquisite dream, within a few hours after she had awakened. The woman's co-operation had been fully gained. She is sincere, truth loving and honest,

and her story is reliable and trustworthy. Allowance should, of course, be made for possible errors in sequence of events and the like.

DREAM: She got off a train at ———, Germany, her home town. She found herself in the railroad station, which was located on a little village street. She noticed that it was not a village station, but a large city railroad station. Other people got off the train at the same time that she did. She knew at once that she was in her old school town and yet she did not know how to get to the school. At first her appreciation of the situation in which we find her in the dream was that she was travelling and that she had come to see her grandmother. When she got off the train she carried a traveling bag. She casually lowered her eyes and looked down at her feet and noticed that her dresses were short, like a girl's. "Ah," she thought, "I must be a girl again." She felt for her braid. She grasped it. To remove all doubt, she pulled her braid over her shoulder and held it in front of her. She looked at it. There was a pink ribbon on it. "Ah, grandmother fixed this before I left home," said she to herself. She felt happy again. She was a school girl. Her grip had now changed to a school bag. Her pencil box protruded from the bundle of books. She examined the books, noticed that they were orderly and safely arranged and now felt that everything was as it should be. She could now go to school, but instead of her going to school, the following incidents next took place: She felt once more, as in the beginning of her dream, that she had come to her home town to visit her grandmother. There immediately came over her a feeling of strangeness and of sadness. Things looked different from that which she expected. She expected to see her little country town just as it used to be in the good old days of early childhood, but things were so different now. The station looked large and city-like. From the station she surveyed the town and it looked very strange and unfamiliar to her. She felt that she had never seen it before. With

its large houses spread out before her eyes, it looked to her not like a village but like a large city.

At this very moment she was transformed suddenly from a girl to her present age. She had become a woman again. She had a satchel in her hand. There were plenty of people round about her. A natural water fountain, used by the villagers as a source of supply for drinking water for home consumption, was near the station, just as things were in the days of long ago. A woman of about thirty or forty years, whom Mrs. S. did not know or recognize, but whom she took to be a plain, honest, German housewife, was at the spring getting a supply of water to take home with her. The spring of her dream was just like that other one which she knew so well in her childhood. Mrs. S. spoke in German to this lady, asking the latter to direct her to her grandmother's home. In speaking to this woman, Mrs. S. used her grandmother's real name—Lena Isaac—and asked the lady whether her (Mrs. S.'s) grandmother and her uncle Hertz and her aunt Henrietta and Abraham Isaac and all the others, whom she mentioned by name, were alive and still lived there. Her informer told Mrs. S. that they still lived in the same old place and that all of them were still alive and well. She inquired of Mrs. S. how long she had been away from home. Mrs. S. replied that it was a long time and that in the interim she had been staying with her uncle. This latter additional piece of information was not true, but she purposely told it to her, because she did not want to tell this woman her private affairs. Mrs. S. now felt very poor, her clothes were shabby and poor looking. She felt that she was in poor financial circumstances and that she was seeking her grandmother in order that the latter might assist her financially and lift her out of her trouble. She felt sad. She realized her misery. She felt that she had left her family behind her, not in America, but somewhere nearby in Germany, where she had been for years (so it seemed to her in her dream). She felt that she had left her home as a result of some misunderstanding or

disagreement with the old folks, as had actually been the case when she came to the United States fifty years ago, and she did not feel it was right and just and proper to come back to them now asking for aid from them. She felt that she wanted to live with the old folks forever from now on. The German lady directed Mrs. S. to her grandmother's house, taking the same path by which Mrs. S. used to go there. Mrs. S. had been away from home for so long a time that she did not care, because she felt ashamed, to tell her guide about her troubles or life history since her departure from the scenes of her childhood. However, this lady seemed to know just about how matters were. Mrs. S. at first imagined that this lady was the mother of an old school mate of hers, who, contrary to her parents' advice, had a few years before Mrs. S.'s departure left for America with a young man whom she had married. But Mrs. S. was uncertain whether or not she really was this girl's mother.

On their way to Mrs. S.'s grandmother's house they walked slowly along the street. At first things looked just as they used to be in the old days of long ago, but as they came nearer the old cottage, things seemed changed. The cottage was there, but it looked old and gloomy; the garden was no longer there; she could see only a tree or sign post (as of old with a blue and white road sign of the flag of ————), near which she had always played garden, when a child. There were a lot of stores in the neighborhood. She looked about for the gate which used to lead to a meadow, on to the river, but instead she saw a railroad track which crossed the river, all looking black, unclean, gloomy. There, too, were many dirty black brick and stone houses instead of the old clean wooden ones. "Well, I must see grandmother now," she said to herself. All alone, she was about to go into the cottage, but next decided that she would not do so, because, firstly she saw nobody about; secondly, she did not want to shock her grandmother by appearing suddenly after such a long absence; and thirdly, she had an idea that this was perhaps not the right house after

all. Furthermore, she did not want to cause excitement by her precipitous arrival. She sat down on the store bench as of old. Soon somebody came forth from the house. It was Mary, her sister. Mrs. S. still did not feel at home. Her heart was beating fast and she was in a highly nervous state about having to meet her grandmother face to face. Finally Mrs. S. said in German "Mary, tell grandmother to come out." Mary took a glancing look at Mrs. S. and silently walked on. Mrs. S. at once recognized that this was really her own (Mrs. S.'s) daughter. Mrs. S. then said in English, "M——, tell grandmother to come out here," as if she and her daughter had both always been living there. M—— did not answer. She behaved distantly and strangely, just like Mrs. S.'s sister.

A matronly looking woman of perhaps forty-five or fifty years, apparently a stranger to Mrs. S., came out of the house and passed Mrs. S. but said nothing. Nor did Mrs. S. say anything to this lady, since she did not recognize her. Mrs. S. again waited anxiously. Another woman came out of the house. Mrs. S. recognized her at once, it was her dear old grandmother. Her grandmother did not recognize her, but walked past the stone bench as if a stranger or passerby were sitting there resting. The old grandmother looked as of old, even younger and better. Then Mrs. S. said in German, "Don't you recognize me, grandmother?" The latter came over, looked at her and asked in German, "Are you little Caroline?" "Yes," she replied, whereupon they fell into each other's arms and hugged and kissed and cried and brushed each other's tears away.

At this point our good dreamer awakened, her hands still clasped as if she had actually been having her grandmother in her arms. She at once realized that she had been dreaming and the dream thoughts came back in quick succession. She felt very happy and much pleased at having had the dream, although the dream visit to her old home town and homestead had not been as pleasant as she had anticipated that it would be, in that

the village had almost become a city and as a consequence had lost the beauty and the fascination and the memories which it previously had held for her.

ANALYSIS: This dream was so vivid and was given to me so soon after awakening that I was enabled to present it with great detail. The reason why I took particular pains to get all the details was that I wished to bring out clearly the trend of the association of ideas and the changing scenes or trends of thought occasioned by a sudden change of association in upspringing thoughts or shifting feelings.

I do not intend to take up each portion of the dream and indicate its possible or probable intimate significance to the dreamer, with the various associations which may be brought forth with respect to each such element. Nor do I intend to point out the relationship between the several scenes of the dream.

In truth, if I were to give a thorough analysis of this dream, in full detail, with the history obtainable from the patient concerning the significance of the many persons, scenes, occurrences and other elements in this dream, I would be compelled to give by far the greater portion of the dreamer's life history. The analysis would be much too lengthy for presentation in an ordinary journal, since it would virtually be a story of this patient's life, with a wealth of material all presented in great detail. I shall content myself with merely taking up some of the most important or worth while points which appeal to me.

THE DREAMER VISITS HER HOME TOWN IN GERMANY. This had been her great wish for many, many years. Her old home town had for her many happy as well as sorrowful associations. It was the emblem of her childhood days, of her happy hunting ground as viewed with an old lady's fancy. Many are the unforgotten charms of the place which Mrs. S. can enumerate; and there are all the kind people who cared for her in her childhood. Under this heading, too, come the various scenes familiar to the old town, the railroad station, the spring, a house-

wife at the spring, the streets, the old cottage and its familiar associations.

This old town also calls to mind the time of her childhood when she was a school girl (into which she for a time is transformed), her sister, her grandmother and other persons and reminiscences referred to in the dream.

HER GRANDMOTHER. Much detail could be added here and much of the early life history of the patient and the history of her family might be elaborated, all centered to a considerable extent about this grandmother on her mother's side. But suffice it to say that when the patient's father left Germany and went to New Orleans in search of adventure and fortune, the mother went with her three children to live at her own mother's house—the grandmother of the dream. One year and one-half after the husband's departure, a letter, sent to him at New Orleans one year previous by his wife, was returned unopened, the party not having been found. At the same time the news was brought to the wife, through a letter from a friend, that her husband had contracted cholera or yellow fever during an epidemic shortly after arrival in New Orleans and had died. The mother now became ill, her youngest child died at one year of age from symptoms of inanition and indigestion, she having been unable to nurse the child; the mother became seriously ill and died not many months later from what was said to be a combination of a "broken heart" and pulmonary tuberculosis. The two surviving children, of whom our dreamer was the older, were thereafter cared for very tenderly by the grandmother. All the joys and sorrows of her younger years are intimately connected with thoughts and memories of her grandmother and her uncle, particularly of the former. These need not be detailed. She has had many occasions since her departure for America, spite the opposition of her guardians, including her kind grandmother, for bringing back to memory her grandmother and all that she stood for in her life. One incident she recalls keenly: It had been her intention to name her first daughter, now thirty-

three years of age and married, after her grandmother. There is a superstition, in which she believed, to name a child after a relative of whom the future mother dreams during her pregnancy; and it so happened that during this pregnancy she had dreamed of her grandmother. This was so much more reason why her first girl should justly be named after her grandmother; but her husband mentioned a name in honor of one of his relatives, before she had expressed her own wish in the matter, and since she was averse to permitting discussions to arise on matters of this sort, she consented to her husband's suggestion. This grieved her sorely. However, when, some years later, her second girl was born, she expressed her appreciation of her grandmother's kindness and her reverence for the old lady by naming the second baby Lena, which was the grandmother's first name.

Mrs. S. tells longingly of how she had frequently yearned, as her last happiness on earth, as her greatest joy in life, to visit the old scenes of her girlhood, the home of her grandmother, and to see those who were still alive and who might know her.

HER SISTER MARY. Since her sister Mary came to America at the age of fifteen, the present Mrs. S. has never been able to get along with her. She had the following causes of complaint against her sister. This sister was two years younger than Mrs. S. At 15, when this sister Mary went to America, she (Mary) had gone to a relative who was the safe keeper of certain money that had been left to Caroline on her mother's death, and she (her sister) had told the lady that her sister Caroline (the dreamer) had consented to her turning over the money to herself (Mary.) The latter had never obtained this permission from her sister and it was only later, after some years had passed, that the elder sister learned of it. Nevertheless she forgave her. Very shortly after this, Mary, who had since married, urged Caroline, through correspondence, to come to America, where, later, the now married sister took advantage of her single sister's good nature and kindness and im-

posed on same on frequent occasions. A second reason why she never felt toward her sister as she should have felt was that she had married a Gentile, although she herself was a Jewess. Mrs. S. never had any specially developed religious prejudice, but she did believe that there should be no intermarriage between Jew and Gentile and could never forgive her sister for this transgression.

The third and most serious cause for dislike of her sister was the following: Some thirty years ago, Mrs. S., who was the mother of several children, one of whom was still a babe in arms and was being breast fed by her, was suddenly taken ill and sent to the hospital, where she was compelled to undergo a severe, major surgical operation. As a consequence, she was unable to care for the helpless infant, and, although her husband had pleaded with her sister to look after the babe for her until she was well enough to feed her by the breast, her sister positively and unequivocally refused to do so. The infant was of necessity sent to a public institution and later died from inanition. Mrs. S. attributed the baby's death to her sister's cruel determination not to care for her and from that time on up to the present day she has never at any time had any further dealings with her sister, although the latter had at one time made repeated attempts to smooth things over and forget the past. In fact Mrs. S. has not heard from her sister for more than fifteen years, does not know where she is or how she is getting on. She wishes her no harm, but she feels that her repudiation of her sister was fully justified and at present she feels no regret for her course of conduct in the matter.

This may perhaps account for the failure of her sister Mary to take notice of her in the dream. As to the reason for the transformation of her sister Mary to her daughter, M———, no satisfactory explanation can be offered, but several points may be mentioned: Both names begin with M, and after calling to Mary without any return reply from her, she may have thought

that she was mistaken in her original recognition of the girl as her sister, and a name with the same letter immediately came to mind as a substitute; and no girl's name was closer to her heart and mind than that of her own daughter, whose name also began with M. Moreover, her sister Mary looked very much like her daughter M———, or it can be put vice versa. Was it also not natural that, not obtaining a reply from her sister, she desired to call upon some one from whom she could expect to get a reply? These three factors may have conditioned the transformation in person from her sister Mary to her daughter M———. Here too can be noted fusion due to rapid association. Her daughter M——— maintains the same strange reserve toward Mrs. S. that had been assumed by her sister Mary, who preceded M——— in the dream scene. This fusion is due to the anticipation of one person, idea or scene and the retardation of another, as so frequently occurs in dreams, and it may be mentioned that the Freudian mechanism of condensation is found to be frequently explained in this way and not in the way in which many Freudians attempt to apply it.

There are numerous other illustrations of fusion portrayed in this dream. For example, we are shown the fusion of scenes as they used to be and as Mrs. S. feared they might now be and as she knew all growing cities are, she having spent the past fifty years of her life, from the moment she set foot on American soil, in the crowded tenement house districts of New York and Chicago, the two largest cities of the United States. Then we see the fusion in the railroad station scene, where we find a new, modern, up-to-date looking railroad station in the old, small-sized country town, with all its old associations. And again, although she finds herself in the town of her birth, she has forgotten the way to her grandmother's house, which is just what she believes is possible after such a long absence from her home and were she to come there now as a visitor. Her transformation into a school girl (following upon a sudden thought

of school and school days) reminds one so much of a fairy tale. Here also is beautifully and exquisitely shown what one may expect in a dream from association of ideas and anticipation of elements of the dream, this being conditioned by what one would expect in the way of association and memories, false or true, of the past life experience. And then again the return of *the thought* that she was a visitor in her home town is succeeded by *the feeling* and this in turn by her return to womanhood. Her conduct toward the country housewife is quite within the range of expectation; nay, rather, it is just what we should expect, is natural and is percisely what we ourselves might or would do under similar circumstances. The association of the town dweller with someone she knew recalls to mind the mother of a girl whose flight to America had made a deep and lasting and memorable impression upon her young mind.

For her short-lived "feeling poor," the feeling that she was financially oppressed and was seeking her grandmother for financial assistance, I cannot find a satisfactory or convincing explanation. Whether or not a sudden feeling of sadness led to these ideas and feelings and whether these were then seized upon as a probable explanation for her visit to her grandmother, (there are many reasons which I need not detail here why this could have been seized upon as a probable or at least a possible explanation for her visit to her grandmother) cannot be stated with any degree of certainty one way or the other. It may be mentioned that a thought or feeling, real or imagined, not necessarily dependent upon any intimate or even most remotely intimate past life experiences but imagined for the moment under the circumstances of the dream, may have come to mind and led to this series of associations. Living in the moment, as it were, of our dreams, taking the dream phantasy for reality, we may almost entirely forget the past and the time, situation or experiences, so that there results a consequent association and fusion with otherwise incompatible scenes or situations.

Mrs. S.'s conduct before the cottage and the scenes which there ensued are such as might occur to almost anyone in a similar situation. There one sees nicely displayed the swaying association and interplay of ideas, feelings and emotions, the anticipations, fusions, probabilities, etc. The reason for the transformation of Mary to M———, I attempted to explain above. Many are the remarks which one is prompted to make when one notes that Mrs. S., sitting on a stone bench before her grandmother's house, under the special circumstances hitherto mentioned, addresses her sister in German (just as she used to in the old days) and her daughter in English (as is her custom at present). I may say, in this connection, that we frequently find just that sort of apparent fusion of ideas or feelings. In reality the dreamer is frequently playing a double or triple or multiple role, virtually a double, triple or multiple personality, characterized by a sudden, momentary side-tracking of the trend of the dream, due to a transient, "accidental," sudden stimulus or association of thought or feeling, with a rapid, lightning-like return to the original theme, this frequently taking place back and forth, with such rapidity and for such a prolonged period of time that it may be said to constitute a play on our feelings and ideas, in varying intensity. Much as one would play on the various stops and keys of a church organ in the endeavor to alternately or irregularly touch the notes of two or more different selections, which one were, as it were, attempting to "play at the same time," so in the dream various complexes or memories or mental trends or underlying personalities may be brought into play more or less at the same time or successively, for varying intervals and in varying degrees of admixture, until, perhaps, at some point in the portrayal, one or the other may get the upper hand and play the role of honor, directing the rest of the drama from its position behind the scenes.

We see in this dream the confusion of time, place and person.

It is also to be noted that although the experiences dealt with in the dream hark back to the early childhood of the dreamer's life, still much of the after life is intimately interwoven with it.

INTERPRETATION: During the recital of this dream an actual drama was portrayed by the dreamer, and, even in the telling of it, she found and felt herself the heroine of it. As she proceeded in the recital of the dream and in the analysis of it, our dreamer passed through many emotional periods. The dream was to her an actuality. Now she was sad and depressed. Then she was joyful and happy. At the recollection of her reunion with her dear old grandmother (as detailed at the very termination of the dream), with their embracing and kissing each other, Mrs. S. cried bitterly, yet joyfully. She told me that she had not dreamt about her grandmother since before her first girl's birth, thirty-two years ago (as mentioned in the analysis above). She had, however, frequently wished to dream about the old home life, with its heart-touching and long-remembered scenes, and her loving grandmother. She would be unutterably thankful for a visit to her old home at this late period of her life's battle (for it surely was one continuous battle and struggle for her). For years she had longed to see the old place. And in her dream she gives herself this yearned for pleasure by transporting herself back to the scenes of her childhood.

The inciting factors which led up to the dream were not definitely obtainable.

Here then, the emotional gratification and pleasure she desired is obtained. Her wishfulfilment is realized; but, to be sure, although wishfulfilment is the essential and dominant note in this wishfulfilling dramatization, the chords of many emotions, feelings and instincts are touched. Many of the complexes roused into activity are unpleasant and disagreeable to her. Fear is projected into the drama at various points.

The wishes and fears, thoughts and tendencies played with in this dream are not repressed or un-

conscious, in the sense in which these terms are used by Freud. The dreamer knows all about them, although, of course, she thinks of them but on occasions.

There is no special symbolism, no special latent or dormant content with its deeply arising significance (in the Freudian sense) found here. The meaning is plain. It is written boldly on the surface. He who runs may read. Surely he who investigates, who stops and thinks and tries to read, can find it there with but little effort at translation.

Sexuality is not at the bottom of this dream. There is a pleasurable gratification—the emotional element. But this element cannot, as I stated in my interpretation of the first dream, be classed as sexual. Nor can it be related to, as being centered about, the sexual instinct in this old lady.

The chords of several instincts or emotions have been touched in this dream, but fundamentally we have the filial feeling brought to the surface. The filial feeling is directed towards her grandmother, on her mother's side. This grandmother took care of her as only a mother can. She indeed was the only mother she had known for many years.

The filial feeling, it may be mentioned, is here dependent upon sympathy, appreciation, gratitude for kindness to her. It is dependent upon the motive of self-preservation, in major part at least. This love of self and the desire for self-preservation cannot be classified as sexual.³

Here and there through the dream one may see other instincts and feelings coming to the fore—maternal, fraternal and others. There also no special sexual significance can be found. Most of these feelings and emotions, with their associated groups or complexes or constellations of ideas can be shown to be more or less indirectly dependent upon the self-preservation motive or instinct.

8. I have taken up the problem of sexuality in a paper entitled "A Criticism of the Conception of Sexuality Assumed by the Freudian School," to be published in the Medical Record, New York.

Time forbids my presenting a more elaborate interpretation or a discussion of the genesis and classification of instincts, motives, feelings and emotions.

I shall not even indicate the various mental mechanisms in the dream or point out the relative intimacy or significance of the different scenes, persons or other elements of the dream. I wish only to present here a rather typical wishfulfilling dream, which, however, does not conform to so many of the other essentials in the Freudian theory of dream interpretation.

I am quite well aware of the superficiality of the records here presented, but every psychoanalyst will pardon me for this. A paper must necessarily be of limited length.

CONCLUSION

After more than three years' study of the subject from an impartial standpoint, I find that here, as elsewhere, I must reject the Freudian theory of dreams in many of its essential theories concerning the content and meaning of dreams. I may refer to my previous conclusions as presented in previous papers as embodying present views upon this subject.⁴

4. "Interpretation of Dreams, Based on Various Motives," *International Clinica*, Vol. IV, Twenty-third Series, 1913. "Analysis and Interpretation of Dreams Based on Various Motives," *Journal of Abnormal Psychology*, June-July, 1913; "A Contribution to the Analysis and Interpretation of Dreams Based on the Motive of Self-Preservation," *American Journal of Insanity*, July, 1914; and reference 2, above.

PSYCHIATRY IN THE DIETARY*

By CHAS. H. HUGHES, M. D.,

St. Louis, Mo.

An Editorial Overflow Contribution.

"**A**LL that a man hath will he give for his life." All that a physician hath of relief and treatment, experience and knowledge, should he give for the recovery and comfort of his patient.

In whatever line of work, for the welfare of the afflicted, one may have wrought or be now aligned, all the resources of his great science and art (at his command) should be searched and selected from for the sole aim of recovery and relief. *Que Prosunt Omnibus* is the right motto.

Even as the position in bed of a patient advised by the neurologist may depend upon the neurologist's skill and knowledge of diagnosis and prognosis beyond the nervous system, as in pleuritic neuritis (Andrals' decubitus) if the patient does not assume it himself, or the bed sore attitude so often directed by the surgeon, or he of the surgeon's knowledge in this regard, in practice—so there are matters of comfort and psychic importance connected with the dietary that are often disregarded.

The treasury of medical resource to be drawn upon, is a common one for every practitioner for the good of his patient and has something of benefit for anyone knowing how and when to make judicious use thereof.

*The Last Word concluding an interesting plea by Dr. H. L. Wright of Santa Barbara, Calif., on the function of the general practitioner in relation to the study and prevention of nervous and mental disease is that they "may not be blinded to the greatest organ of all—the mind."—*Calif. Jour. Med.*, Oct. 1914.

The physician may benefit most thereof and therefrom who understands most thereon concerning the mental impression and tastes of the patient concerning his dietary.

The oculist, the aurist, the laryngologist, pharyngologist, microscopist, genito-urinary man and special surgeon, the internist, the dermatologist, the odontologist who studies the teeth in their origin and growth, their pathology and physiology and the states and conditions of the entire person and the dentist who works upon the teeth or substitutes them by his art, can learn and profit from this source.

Also the gynecologist, the physicist, the syphilographer and *vice-versa*.

The alienist and neurologist may learn from all these sources and likewise the good general physician may profit from all of these and from the test tube, the microscopic lens, the x-ray and the radiograph.

"Too often in medical practice the light shineth in the darkness and the darkness comprehendeth not," as in the up-to-date biological laboratory for the physician.

PSYCHIATRY IN THE FEEDING OF THE INSANE

In providing the dietary of the insane who may not require, because of special exemption of particular articles of diet being required, such as for diabetes, diarrhoea, typhoid, etc., their gustatory wishes and comfort should be considered somewhat. It is a mistake to consider that they may be given "just anything that is nourishing" to eat and served in any way and in any condition, or that food requiring to be cooked, be served in any way either hot or cold if chemically indicated.

When the writer first assumed the superintendency of a large state asylum (or hospital for the insane as it is now called), built to accommodate several hundred inmates with near a hundred attendants and others (officers and employees) with wings remote from the center building kitchen, about two hundred feet distant and the way from the culinary department to the patients' dining rooms uncovered, and the food carried out in the open to these

far distant dining rooms on waiters, on the heads of servants in winter, the food reached the tables of these dining rooms cold and unpleasant, especially at breakfasts and luncheon hours (the mid-day luncheon being really the dinner time.) The psychic effect, to all but the most maniacally indifferent, being detrimental and uninviting. (Of course to an occasionally exalted maniac a scant cold meal might excite the delusional impression of a princely feast, but this deluded state of mind would not justify a cold and cheerless dietary for them and others.) The majority of the insane are not indifferent as to what they eat. The better the diet, as well as environment of the patient, the more hopeful the prognosis, either in hospitals for the insane or elsewhere, in certain cases, as a rule.

Though not exactly germane I may here relate that one of my managers (a county member) objected before a board meeting, to my having strips of carpet beside the beds of the non-maniacal, saying, he "did not enjoy that luxury himself." He considered all insane as indifferent to their surroundings and unlike sane people as to the physical comforts of existence where as many of the insane are like sane people in this regard and sometimes they are over alert and sensitive on this subject. This man and another of my Board of managers, equally intelligent, ultimately joined by two more brought about a legislative inquiry as to my extravagant management, although five other managers sustained the propriety of my suggestions on this and other subjects.

Among the complaints I had to face was the placing of tramways in basement from kitchen to all the dumb-waiters for the conveyance of supplies thereto (meals especially) in hot vehicles. Another charge was, in discriminating in clothing prescribed from a psychiatric point of view, a prescription which was sustained also by the court when the asylum treasurer was sued by a county for refund for the cost of a black frock coat, etc., for an unfortunate and bankrupt college professor, who had never worn any other than a similar garment

and a black alpaca dress for a refined middle aged lady music teacher who had never in all her later life worn any other kind or quality of dress. The defense was that both were medical prescriptions for those not used to pauper apparel. That this apparel for both was an essential to the patient's welfare in the direction of recovery, considering the manner of their living before they were mentally maimed, these garments having been asked for, that they were in accordance with their normal tastes as to dress when the patients were sane and were psychiatrically contributory to their recovery. These clothes were bought by the steward on my order as prescriptions. Both patients recovered and went from the charge of the county maintaining them, to self-maintenance in rational life.

Neither of these unfortunates, however, survived many years after and they "point a moral" if they do not adorn a tale. The professor taught *materia medica* in a prosperous medical college. He taught that alcohol was the remedy *par excellence* for tuberculosis. Suspecting tuberculosis he began in himself to verify his views and became the excessive drinker that devitalized him and brought him to the asylum and finally, after his brain recovery, he relapsed and died of another sequent disease.

The lady, too, subsequently relapsed to the habit of chronic meconism that caused her insanity. She died, however, of an intercurrent disease, pneumonia, which might not have caused her death, had she known the full peril of frequently returning to opium taking, after different attempts at self-recovery without medical aid and the consequent atonic state of and failure of her unaided resistance powers. The writer did not then comprehend, as he does now, the deceptive and disastrous nature of this perilous habit forming, nerve center damaging and brain destroying drug, deceptively and insidiously impairing the powers of the will and poisoning the brain and its peripheral nerve relation, control.

Psycho-clinical, psycho-chemical and consequent psycho-therapeutic, as well as pure chemico-biologic, laboratory considerations, should claim our attention in prescribing what, when and how one who is ill should eat.

There are psychic-chemic, biologic system conditions which influence to modify that wonderful psycho-chemico biologic work going on in every human, called by us sometimes blindly, the metabolisms of the organism. This remarkable influence is too often ignored in the estimate of results of pure biochemical effects, as gleaned from laboratory experiment with the microscope, test tube and crucible and without regard to the psychology of the higher human animals with psychic predilections, appetites, aversions and special tastes.

Of these, the true and successful clinician will and must, whether he be humoralist, solodist or indefinite, in his views and modes of practice, take due note. "The blood is the life," but the neural centers, (high and low,) the psychic neural centers especially, including the ductless glands, especially the cerebral apophyses, suggest the necessity of a more or less intimate knowledge of the relations of which to lower centers and to the viscera, entering more or less extensively and forcefully into our conceptions of the right management of conditions which we are called upon to remedy, when the marvellous machinery of the human organism goes wrong from the normal, in the makeup and movement of the machine—its visceral, hepatic, gastric, renal, cardiac, pulmonary centers, etc., when we designate it, in the group of disease.

To understand the importance of considering the appetites, predilections or aversions of food tastes, we have only to think of the potency of psychic shock in physiologically bringing the blush of shame or surprise or the pallor of fear, the paralysis of function resulting from fear or the exuberant exalted states of delight, the agreeable cerebro-psychic impressions of sweet smelling aromas and the thousand and more impressions that increase or lock important secretions or exalt or suspend

excretions, as in the impress (salutary or non-salutary) of the ductless glands and the emotions that exalt and others that depress, the movements of the heart, or even shock it into silence and suspension of movement never to go again.

If the bowels and bladder may be moved and the action of the skin increased, suspended and pale under fear, the tears caused to flow, the hair to blanch or the appetite fail under great emotion, why should we not consider this aptitude of the human system under psycho-cerebro-neural influence as capable of modifying results as it is and consider the patient's feelings in this regard and not be too rigid in dietetic autocracy of prescription, simply because the cold chemico-hemic conclusions of the biological laboratory suggest absolute exclusion of a certain article of diet.

We do not understand the inferior animals' food longings or aversions as we may learn those of a human being under treatment, nor do we know the exact harm of total, sudden, complete contravention of a certain life long habit formed appetite, which, even though we can modify it in a measure by substitution, as in diabetes melitus. But we can see the restlessness and sleep loss and mental distress of violent withdrawal and persistent complete deprivation, without substitutive support, of other mentally satisfactory therapy and should prescribe it, at least a slight amount of it, sufficient to appease imperative taste cravings. In our dietary therapeutics we should somewhat regard the patient, his feelings and welfare, wherever and whenever not imperatively prohibitable even to the allowing of a modicum of water after an appendectomy, for cerebropsychic distress may hinder recovery as well as a too greatly thinned blood, which in our judgment is a surgical fallacy, notwithstanding possible risk of hemorrhage.

Let us look back and estimate, if we can, the harm and suffering caused to patients of the past by water deprivation to them, in fevers for instance, an abstemious observance, the breach of which brought everlasting

fame to one of our craft and on his monument in Dublin is engraved, as he requested should be placed there "He fed fevers." Graves not only gave them to drink but he fed them, as his kind heart and good judgment dictated and though long dead, he yet lives in his common sense precept and practice which the medical and lay world now follow. But just now we are inclined to listen too much to chemico-biological laboratory suggestions as to absolute abstention from sugar forming foods and water exclusion. Not that diabetic bread should not be prescribed, but that pure water will not harm the kidneys and the psycho-gastric craving should be somewhat, if ever so slightly, appeased with a little real sugar as well as saccharine.

And so it should be with the wise and observant clinician all along the line in therapeutic dictation in disease generally. Regard kindly and considerately the cravings of the patient. Ease their minds a little of its food craving distress so far as practical. It is fortunate, in this regard, that in some diseases like diabetes, which by the way is often psycho-cerebral in its origin—a distress disease—that we have substitutive saccharin, etc. to our hand.

The brain and metabolic processes are closely related in influence and gastro and other enteric and cerebral states are inter-related in (reciprocal) sensation. In our dietary regulations, therefore we should well consider the brain and mind and their systemic relations, as well as the liver and stomach and other viscera in the system's movements and control. Intelligent restaurateurs appreciate the principle of agreeable mental impressions; though they may not understand the *modus operandi* in the nervous system (and for that matter neither do we entirely and always, though we have learned up to date, much of the psycho-neural relations), and these restaurateurs and our hotel managers (that is the wiser ones) act accordingly in adorning their premises and in preparing and setting before their guests, (or in families the good man or woman of the house,) attractive, appetizing dishes

in appearance, smell and taste. Likewise the better hospitals pay attention to the pleasing character of the patient's environment at table, in room, dormitory, corridor, dining room, living room, toilet, etc.

The modern, better-class hospitals for the psychopathic are especially illustrative of this important consideration in many respects; in construction, location, internal arrangement and decoration and in regulation of attendants, white aproned, capped, etc., in manner to best promote the welfare and happiness of the patients and prevent, so far as may be, irritation and discontent and in providing rational diversion, substitutive of what may have been had or missed in the outside world, in the patient's rational days.

The principal point of this communication is that to as great an extent as may be compatible with the patient's welfare, in whatever dietary we direct, we should not omit to consider the patient's pleasure in appetite and taste, so far as we can, and clinically compromise a little where we cannot exclude them, with the rigid suggestions of the bio-chemical laboratory. This is simply applying the rule to dietary that most of us do in our therapeutics. We do not give plain undeodorized castor oil, as our grandmothers used to do, nor jalap in powder only, as I have known a physician to do, or mix a pill with saliva as I knew one doctor to do in the patient's presence, with the remark that medicine was not confectionery, or apply irritating applications without associating some soothing drug where possible with the consolingly meant, but not compensating remark, "no smart no cure." Those days have almost passed away, we are thankful to say, we hope, never to return, for we are yet learning some new and better things in our therapy and dietary almost every day.

Apropos and in conclusion, we note an interesting and further suggestive contribution in proper extension of this important matter of mental impression and personal satisfaction as to dietary, which suggestively includes agreeableness in medical dosage, is a potent contribution on "Voice and Manners in Medical Practice"

by Dr. T. D. Crothers, of Hartford, Conn., which appeared in the Medical Record for last May 18th.

Crothers advises that "every medical student be taught voice culture and general manners" to which we might add voice and manners pleasing to the patient by the physician and nurse, which is also obviously implied.

While Dr. Crothers views are not precisely germane, they are in line with the larger subject of psychiatry in medical practice of which psychiatry in the dietary is a part.

The dress and manner of the physician in the sick-room may even affect the appetite, as in the case of the patient who could not eat or take a pill after seeing the doctor make up the pill with his own saliva and roll it into shape with his hand on the thigh part of his trousers leg. To the credit of country doctors who make up their own prescriptions, I never knew of another similar disgusting instance, yet this man was regularly graduated and classed as a gentleman. He was a good judge of whisky. The whisky may have been behind his pharmacy.

THE PROPOSITIONS OF THE ASSOCIATION OF
SUPERINTENDENTS OF AMERICAN HOSPI-
TALS FOR THE INSANE.

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(Continued from last issue.)

PRELIMINARY NOTE BY THE EDITOR

Now that psychiatry is beginning to attract, from the general profession, the practical consideration it has so long deserved and to accomplish which, this magazine was founded and has so long striven to promote, we deem it appropriate that we should bring again to the attention of the medical men of the country these valuable suggestions concerning the care and treatment of the insane in our psychopathic hospitals, made more than a third of a century ago, by eminent men in American psychiatry and ratified by that eminently practical and clinically experienced body of physicians who, following the Esquirolian injunction of living with the insane, to better understand them, the superintendents of American hospitals for the insane adopted and promulgated these propositions.

This association is now the American Medico-Psychological Association of which Dr. John Curwen, the writer and the eminent Dr. Isaac Ray were mainly the distinguished and ever to be remembered authors.

THE principles which underlie the arrangement and construction of a hospital for the insane are founded on the dictates of sound, rational common sense, and the results of experience obtained by residence in such buildings, and derived from the careful study of the requirements of the peculiar class of persons for which they are to be constructed, and whose comfort and treatment are alone to be considered in such construction. The most important of these principles may be stated to be such a

plan as will facilitate to the greatest degree, and render practicable at all times, the readiest and most thorough supervision of every department by the officers, careful selection of the best material for the construction, and the most unwearied attention to the proper arrangement of the different kinds of that material in the various parts of the building, that everything may not only be of the best quality, but put together in the best manner calculated to secure the purpose designed; the most systematic adaptation of every part to the wants and requirements of those who are to occupy the wards; ease and economy of administration; and ready and prompt distribution of heat, food and other articles constantly required, and special care that every part of the building shall have abundance of light and air.

While the greatest latitude may be allowed, in what may be termed the architectural arrangements, the plan which has been found to combine, in the greatest degree, all the points enumerated above is the lineal plan, in which each wing shall be opened to the full light at both ends, and the different wings shall be continued in the same line as that nearest the center, but falling back so far as to leave the second open at both ends, and so on through all the wings, in contradistinction to that plan which would place the second wing at right angles to the first, and so make the whole surround an included square. This plan was first fully elaborated and explained by Dr. Thos. S. Kirkbride, for so many years the able and accomplished superintendent and physician of the Pennsylvania Hospital for the insane, in Philadelphia, and has been adopted in the majority of hospitals for the insane erected within the last thirty years. While adhering strictly to this principle of construction many changes in interior detail and arrangement have been made by different persons, but these changes do not in any manner affect the original idea.

VI.—“All such buildings should be constructed of stone or brick, have slate or metallic roofs, and, as far as possible, be made secure from accidents by fire.”

Circumstances connected with the locality of the building will often determine the fact of the use of stone or brick in the construction, but when stone is used it is always best and, in the end, most economical, to line the outer wall with brick with an air space of about three inches between the brick and the stone.

The brick should be well joined with or "tied into" the stone, at short distances, so as to make the brick secure and firm, and the space thus left between the walls will not only render the walls more dry and prevent the penetration of moisture, after a long continued driving storm, as is often seen in solid stone walls, but will also have the effect of making the building warmer in winter and colder in summer, from the fact that neither heat nor cold can penetrate beyond the layer of air confined between the walls.

The same effect could also be obtained in the construction of brick walls in a similar manner and thus avoid what is so often required, the furring off or nailing strips of wood to the walls on which the lath is nailed. Lath and plaster partitions are always objectionable in parts of a hospital occupied by patients, from the ease with which they may be broken, and also from the fact that they furnish a more ready receptacle for rats, mice and vermin of various kinds. The wood used in furring off walls, and lath and plaster partitions are also objectionable from the fact that fire is easily started in them, and when so started is extremely difficult to trace or to extinguish. The objection to metal roofs in this climate arises from the injurious effects caused by the alternate expansion and contraction of heat and cold, the thermometer often falling twenty or more degrees in the course of a few hours; and in certain metals the constant tendency to rust, requires the frequent use of paint to preserve them from the corroding influence of heat and moisture.

Sufficient care is not generally exercised in preparing the sheathing of the roof on which the metal roof is to be laid, or for the slate.

The best plan is carefully to plane and plough and groove the boards, and have them laid as carefully as a floor. Slate, when properly laid on a roof, thus carefully prepared, furnishes the best material for roofing in a climate subject to so many changes in temperature.

The cornices of the roof should be made of the best galvanized iron and carefully backed up with brick.

The surest plan to avoid accidents by fire will be to have the whole interior constructed with brick partition walls, the floors made of brick arches between iron beams, and this arrangement carried through every part to and including the ceiling of the upper story directly under the roof, and the main division walls of brick carried up to the roof.

This practically renders the building fire proof, as the only part in any hall which could burn would be the floor, and if that is well laid, of good and thoroughly seasoned lumber, there will be the smallest chance for the fire to spread from one room to another. Every room is in effect a brick box.

But where this cannot be done, and in institutions already built, the best plan will be to introduce pipe connected with the tanks in the attic, or from an outside reservoir on high ground, into each ward, and have sufficient hose to carry the water to every part of the ward, and fire plugs outside with hose of large size. An additional means of security, when the institution is heated by steam, will be to carry pipes into the attic of the center and different wings from the boiler, so that by opening a few valves, the whole attic could be filled with steam, in case a fire should break out, and it is well known that no better fire extinguisher can be found than an abundance of steam.

VII.—“Every hospital having provision for two hundred or more patients should have in it, at least, eight distinct wards for each sex, making sixteen classes in the entire establishment.”

While this proposition says “at least eight distinct wards for each sex,” it implies that a larger number would

be advisable, and, as a general rule, it could and should be arranged so that a more thorough classification could be obtained in a larger number of wards.

This, in many cases, is very necessary for the comfort of patients and the greater success in treatment, so that those patients who were annoying to others and particularly to convalescent patients, may be removed from the wards for that class, and placed among those who could not be so much injured by their conduct or their manner of talking. It is well known to every superintendent that there always is a certain class, generally quiet, and free from excitement, and who can behave themselves very well, but who take special delight in retailing the most outrageous stories to all who come within their reach, particularly to recent and convalescent patients; and, the impression thus produced on this class of patients is often very injurious and calculated to retard their restoration, if it does not throw them into a state of excitement or lead to more serious results.

The arrangements for classification should be such that all this class should be separated entirely from convalescents, and placed where they could have only those of a similar inclination with themselves to associate with, and less incentive therefore, to exercise their mischievous propensity. The subject is more fully stated in a proposition adopted in 1866, which reads thus:

"The facilities for classification or ward separation possessed by each institution, should equal the requirements of the different conditions of the several classes received by such institutions, whether those different conditions are mental or physical in their character."

VIII.—"Each ward should have in it a parlor, a corridor, single lodging rooms for patients, an associated dormitory communicating with a chamber for two attendants, a clothes room, a bath room, a water-closet, a dining room, a dumb waiter and a speaking tube, leading to the kitchen, or other central part of the building."

The parlor should be so placed as to command the most pleasant outlook to be obtained, and should be of

ample size so as to afford room for a piano, library, sofa and the other necessary furniture; and have as much light from windows as possible; and the whole front might easily be made to resemble a bay window by projecting the wall so far in advance of the other walls, as to allow a window to be placed in the connecting wall on each side.

Everything about this parlor should be made bright and attractive by pictures and other ornaments, so as to induce the patients to spend as much time in it as possible; though when bay-windows are placed in a ward, they seem to be places of greater attraction.

The corridors should be made at least twelve feet wide and twelve feet high in the ceiling and "no chamber for the use of a single patient should ever be less than eight by ten feet, nor should the ceiling of any story occupied by patients be less than twelve feet in height."

Where the wing immediately joining the center connects with it, a space of at least ten feet should be arranged with windows open on each side from floor to ceiling, so as to give abundance of light and air at that point, and these windows, like all the windows in the wards, should be protected with some ornamental form of guard to prevent intrusion by outsiders, and to prevent also the escape of patients.

The omission of this open space makes that end of the hall dark, and at that point, also, the air will be very apt to be impure from the inability to obtain a free circulation.

It must be very distinctly kept in mind that every part of a hospital for the insane, occupied by patients, should be as bright and cheerful and have as much sunlight as it is possible to obtain by means of windows and openings at the ends of the hall. No hall can be made too bright and cheerful at all times; and even when the warm rays of the sun in summer require to be excluded, that can be done without interfering in any way with the cheerfulness and brightness of the wards.

The advantages of this abundance of light are two-fold: In the first place, as a matter of health, and, then, as tending to promote greater cheerfulness in all within the range of its influence; for it is a matter of common observation, that persons obliged to be in dark rooms become dull and depressed, while they are at the same time more blanched and unhealthy in appearance and in fact.

It has been objected to rooms on both sides of the hall that the effect will be to make the halls, if long, dark and gloomy, but if they have large windows from floor to ceiling at each end, with a large bay-window on each side in the center, no unpleasant gloom or darkness will be observed; and the bay-windows will give a very pleasant sitting room which will be occupied nearly all the time by the patients, and will be a place where flowers, birds and other objects of interest may be kept. In the arrangement of the rooms in a ward, great care should be taken to have the door and window opposite, so that the bed may be placed to one side and out of the line of any drafts, which would be occasioned by opening the door and window.

Every room should be provided with a flue for the admission of warm air, and also one for the removal of foul air, so arranged, that no unpleasant draft from the warm air shall strike the person who may occupy the room; and, where a system of forced ventilation is used, this may readily be effected by having the warm air admitted above the level of the person's head, and the foul air removed at a lower point; but unless a strong power is used to keep up the circulation, this arrangement will not answer satisfactorily in practice, whatever excellencies may be claimed for it in theory.

The question of the particular arrangement of the window of the room must be left to the prevalent idea in any particular section.

There are really three different forms of window; one where both sashes are of iron and the upper is made to balance the lower, and when the lower is raised about five inches, the upper is lowered the same distance,

by an arrangement of connecting chains and pulleys; another, where the upper sash is of cast iron and stationary, and the lower sash, hung with cords and weights, raises the whole distance, and a guard of an ornamental character protects the space opposite the lower sash so that the patient cannot fall out or jump out; and, the third form is where both sashes are of wood and hung by ropes and weights so as to move up and down, and the space outside is covered with a guard, either plain or ornamental.

The idea has been strenuously advanced by some that all guards to the windows and locks to the doors should be dispensed with, which we believe to be most erroneous, and one of those extreme measures which will cure itself by the very state which it will induce, of remissness on the part of those in charge of the wards and of accidents and injuries to the patients. It is going from the extreme of care to the extreme of carelessness, and avoiding that which has always been found the safest, the mean between the two extremes. If the insane be irresponsible, as will be generally admitted, the effort to give them full liberty to go and come as they please, places them in a position attended with risk to themselves and to others; to themselves, because it places them in a position to be subjected to influences and temptations which will have a decidedly injurious influence, and to others by the risk to life, person and property at the caprice, ill-will or the delusions of an irresponsible party, and it is neither right nor just to expose the innocent and unsuspecting members of any community to any such risks.

It has been the fashion with many to insist on large associated dormitories, but we believe this to be contrary to the desire and habits of our people, who all insist on having a room to themselves. It is true that a hospital can be constructed more cheaply when the majority of the patients can be placed in associated dormitories, but there are many other things besides cheapness to be considered in the construction of a hospital for the insane,

and chief among these are the comfort and welfare of the patients.

We have no sympathy, whatever, with that wretched sentiment, born of parsimony and disregard of the feelings and rights of others, which insists that the comfort, the welfare, the happiness and the restoration of the insane, of any class, are to be weighed in the balance with a few hundred dollars. The State is bound, in honor and duty, to make the very best provision for all its wards, and the more helpless and dependent, the greater care should be exercised in provision for them; and while proper economy should always be exercised in the disbursement of all money, both in public and private undertakings of any kind, and every dollar should be strictly accounted for, no State nor any private corporation or association can afford to do wrong, for wrong in every form is wasteful expenditure, nor are any so poor that they cannot afford to provide for those who may be committed to their care, in that manner which will best promote the welfare of the insane in every way in their power. That cannot be done when the individual is placed in a position which injures his self-respect or is entirely at variance with all his previous habits and education. Men and women insist on some accommodation which will give them a degree of privacy, which cannot be obtained by being obliged to be in a large dormitory, and it will not do to say that because they are insane their feelings are not to be considered.

The effort in these days seems to be to lower the standard of self-respect and make people feel their dependency; but true humanity teaches that men, born in the image of God, should be trained to a proper regard for their high destiny, and that true charity consists in the dispensation of its gifts, in such a manner as to instill higher aims and more ennobling sentiments, and to lead all, of every class and condition, to seek that which will give true comfort in better and more enduring provision, for themselves and all within the sphere of their influence.

The principle which should govern in all cases is: "Whatsoever ye would that men should do to you, do ye even so to them;" and regard must also be had to the consideration which sooner or later comes home to every one in some form, that he or his may at some time require some such accommodation as a hospital for the insane affords, and he must consider how the plan of such association would suit his own case, or whether he would like some member of his family placed in such a position as has been indicated. Unfortunately this principle has too limited an application in governing bodies, and, particularly where the expenditure of money in public buildings is involved, but that is no reason why it should continue to prevail, but, on the contrary, every dictate of justice and humanity demands that the sooner men in every relation of life do, as they would be done by, the better will mankind be.

There is still another consideration directly bearing on the patients themselves, that the proper degree of sleep at night, and that calm state which should precede and is necessary to sound sleep, cannot be had in nervous and restless patients in a room where a number sleep, for the reason that among that number, particularly, if it exceed six, there will always be one or more who are restless and uneasy and are apt to be up and about the room, to the annoyance of others and interference with their sleep; and unless the room is very well ventilated, the breath and other effluvia arising from a number of persons, soon vitiates the air so as to render it unpleasant and unhealthy.

The argument in favor of dormitories, that those inclined to suicide may be placed in them with greater safety and less probability of an attempt on their part to effect their purpose, has only a very limited application, and really, as a rule, does not effect the object.

The only preventive of suicide is careful and constant watchfulness by day and by night.

Every room of the kind should have a strong wire frame in the upper half of the door, so as to answer the

double purpose of easy inspection and more efficient ventilation.

It is well known that associated dormitories are not used until it becomes a matter of necessity, and the fewer of them, and the more limited the number they can accommodate, the better for the patients themselves.

Where a dormitory of large size is used, the necessity of a chamber for two attendants communicating with it is requisite, in order that they may better minister to the patients in it, and prevent any disturbance, though, as a rule, if the attendants have attended to their duties during the day, they generally sleep so soundly, and they should have their full sleep for the proper performance of their daily duties, that they hear very little that may occur during the night, unless of a very unusual character, and the real dependence must be on the activity and efficiency of the night watch, which in cases of special emergency would be increased for the time.

More thought and attention should be given to the room designed for the clothing of the patients in each ward than has usually been the case. It should be of ample size, well lighted and well ventilated, and placed in close proximity to the bath room, and should be conveniently arranged with closets and boxes in which the clothing can be neatly folded and arranged, with hooks for hanging up coats and various other articles; which are better hung up than folded and laid away. In addition to this there should be ample arrangements for the sheets and other bed clothing, with a convenient place in which hats and shoes may be placed by the men, instead of being allowed to lie promiscuously about the ward to the annoyance of all careful people, and the inevitable loss to those who wear them.

The bath-room should be conveniently arranged with an ample supply of hot and cold water, and should also be kept at a warm temperature in the coldest weather so that the most delicate may suffer no injury before entering or after leaving a bath. In immediate connection with the bath-room should be a wash room with station-

ary basins and an ample supply of water, to which the patients can have ready access at all times.

The arrangements of water closets are generally on too limited a scale, and it is best to place in every ward at least two hoppers, so that there may not be any excuse for careless habits on the part of the patients, by inability to obtain the needed accommodation.

While such improvements have been made, and are still making, in the arrangement for these conveniences, it is not requisite that any special plan should be insisted on further than that "all water closets should, as far as possible, be made of indestructible material, be simple in their arrangements and have a strong downward ventilation connected with them," and, also that "the floors should be made of material that will not absorb moisture."

The dining room should be of such size as to give comfortable sitting room for all who may occupy the ward, should be bright and airy, and should have connected with it, a neat china closet, where all the articles used on the tables can be kept in neat order and in it a sink with hot and cold water attached, in which the plates, dishes and all articles used on the table can be washed.

The dumb-waiter should be conveniently located in connection with the dining room, and the apparatus for hoisting it should be such as to involve the least labor and trouble, and easy communication afforded with the kitchen by means of a speaking tube, or as may now be very satisfactorily arranged, by telephone.

IX.—"No apartment should ever be provided for the confinement of patients, or as their lodging rooms, which are not entirely above ground."

The requirement of this proposition would appear superfluous, but it seems needful in these days when the effect is made to cheapen things to the very lowest point, and endeavor to make provision for a certain class of the insane in a manner, which is not in strict accordance with that proper regard for their comfort and welfare which their position imperatively demands, and also to place, so

far as words and a protest can do it, a barrier to any further efforts in that direction.

X.—“No class of rooms should ever be constructed without some kind of a window in each, communicating directly with the external atmosphere,” and this, for the reason before stated, that every patient should have the benefit of sunlight to as great a degree as possible, and a better opportunity can be afforded for the freest admission of fresh air, which in many rooms is absolutely requisite to insure cleanliness.

The eleventh proposition has been already considered in connection with the size of the rooms to be used for patients.

XII.—“The floors of the patient's apartments should always be of wood.” It would seem scarcely necessary to insist on this requirement, but as stone and brick floors have been used in the past, and are exceptionally cold and uncomfortable, particularly for that class who would be most probably compelled to occupy such rooms; there might be those who would consider it a good thing to do, to return to such a state of affairs in the future, on the ground that wooden floors would rot out by frequent scrubbing, and it would be economy to prevent such expenditure.

Wooden floors may be rendered nearly, if not quite, impervious to all fluids by an application of boiled oil, applied hot, so as to saturate the floor, and having this repeated every few months.

XIII.—“The stairways should always be of iron, stone or other indestructible material, ample in size and number, and easy of access to afford convenient egress in case of accident from fire.” Every ward should have, at least, two stairways, one at each end, leading directly to the ground, both front and rear, so that, by opening the doors the patients could readily be taken out to the ground around the building. The stairways must be of iron, stone or slate, and walled into a brick wall on each side, so that they shall be virtually fire-proof from top to bottom—all the landings being of the same material as the stairs.

Circumstances peculiar to the location of the hospital will probably determine the character of the material to be used, as in some localities one of the articles named may be obtained at a more reasonable price than others. Slate forms really the neatest and pleasantest stairway to travel over, as it is less noisy when trodden on, and experience has shown that it wears very little by constant treading over it.

Unless care is taken to have the iron slightly roughened on top of the step, it will in time become smooth and slippery and the same may be said of certain kinds of stone—but it does not hold good in slate. In these days when so much is said about fire-escapes from public buildings, it is wisest and best to construct the stairway in such a manner as to be virtually a fire-escape from all the wards. This can readily be done in the manner indicated above, and then should a fire unfortunately take place, the inmates can all readily be removed by the mode of egress to which they have been accustomed.

Any fixture outside, such as is usually constructed, is worse than useless, for very few patients would venture on them, and they would be very likely to be used by mischievous persons, for the purpose of annoying the patients.

For females such outside fixtures would be utterly impracticable; whereas, a stairway constructed of either of the materials named, and well built into a brick wall, would be perfectly safe and secure, and very easily available at all times, and free from every objection which could be urged against outside fixtures.

SELECTIONS

NEUROSYPMTOMATOLOGY

CROSSED EXTENSOR PLANTAR REFLEX.—By Dr. L. J. Kidd (Rev. f. Neur. u. Psych., Vol. IX, No. 6). Reports but four cases of unilateral crossed extensor response. Four patients with disseminated sclerosis, paraplegic type. Bilateral direct plantar response, with crossed extensor response was present. Spasticity in all. One case more marked on one side. Here the crossed extensor response was obtained on stimulation of the sole of the foot of the more spastic side; all showed typical slow large toe extension. In all the crossed extension was likewise slow, but slightly less in degree than that of the side stimulated. The writer suggests plantar reflex dorsal decubitus and Collier's position.—Abridged Abst. Post Grad.

NEURODIAGNOSIS

SUDDEN DEATH.—“The mystery of sudden death in the absence of all known causal elements has often been the subject of medical and especially of forensic discussion. The monograph by Brouardel on “Death and Sudden Death,” published many years ago in English, was undoubtedly of service in calling the attention of the

American public to this subject, and we continue to hear of cases of thymus-death and other symptomatic deaths (which upon analysis seem to involve the status thymicolymphaticus as the chief factor.) A careful review of the conditions which lead up to sudden death shows a great lack of unanimity. Given there are one or two inevitable causes the secondary factors are very numerous. At a meeting last spring of the Niederrheinische Gesellschaft für Natur- und Heilkunde in Bonn (Deutsche medizinische Wochenschrift, November 12) Ungar related a case of sudden death preceded by hysteriform crises. With many phenomena of hysteria there were no stigmata, paralyses, or contractures. The crises were motor and accompanied by cries. The woman came out of this state and seemed to be nearly normal. In the midst of this new health she was seized with attacks of pain in the head and neck, had motor crises with weeping, etc. She emerged from this seizure but within a short time had another epileptoid attack, with exposure of the genitals. The whole picture was highly hysteroid. The crises became more frequent and severe until death took place, apparently from sudden cessation of respiration. At autopsy pronounced lesions were found in the ventricular region of the brain. The case is valuable as showing that clinical hysteria may end fatally; the practitioner, confronted with these crises, must remember that a fatal ending is by no means excluded."—Med. Rec., 12/26/14.

This is another post-mortem proof of the error of the too frequent diagnostic conclusion that where hysteria is existent all is hysteria.

It would have been more satisfactory if the fourth ventricle (vagus area) autopsy had been more definite in this record.

NEUROPHYSIOLOGY

BLOOD THREADLETS.—Upon the introduction of dark field illumination into medical microscopy peculiar thread-

like bodies were described as visible in the blood, in which fluid they floated with a wave-like spontaneous movement between the blood corpuscles. They were variously regarded as artefacts and parasites. Apparently a constant blood find of man and warm-blooded animals their number was much increased in certain diseases, notably acute general infections. As the numerous data concerning the incidence of these bodies in the blood have never been collected and systematized and as the subject has fallen into more or less neglect, Knack attempted to revive interest therein, in a paper read before the Biological Section of the Aertzlicher Verein of Hamburg last summer (Munchener medizinische Wochenschrift, October 6.) He described a simple method of rendering the bodies visible, but was unable to account for their presence. The only hypothesis held at present is that they are derived from the disintegration of red blood cells, and represent a myelin form set free from the cell lipoids. He pointed out that the threadlets could not be derived from the blood fibrin.—Editorial selection. *Med. Rec.*, Dec. 5, 1914.

"IT SHOULD BE NOTED here that these teachings, in a measure, verify the adage, 'There is nothing new under the sun.' In the latter half of the 17th century was founded the iatro-chemical sect. According to Sylvius, an industrious student of Van Helmont and Descartes, health depends upon the relation of the fluids, acid and alkaline, their union producing a neutral and milder substance. Two kinds of diseases were distinguished, the result either of acid or alkaline acidity. Among the prominent followers of Sylvius might be mentioned Willis, the celebrated English anatomist; Glauber, the discoverer of sodium sulphate (Glauber's salt), and many others, but iatro-chemistry gradually lost repute, and was completely overthrown early in the 18th century, principally through the teachings of Hoffmann.

"Founded upon mere assumption and a smattering of chemistry, with no definite conception of physiology,

iatro-chemistry was foredoomed to failure. It seems paradoxical too, because this was a period of exceptional activity in laying the foundations of medical science. Such names as Harvey, Steno, Vieussens, Malpighi, Spigelius, Bartholin, Asselius, Pauli, Mentel, Wesling, Highmore, Glisson, Wharton, Leeuwenhoeck, Ruysch, Sydenham, Boerhaave, Stahl, Albertini, Valsalva, Bellini, Swammerdam, Meibomius, Peyer, Duverney, Cowper, all belong to this period, and it is remarkable, to say the least, that they failed to distinguish the normal alkalinity of the building-up, from the normal acidity incident to the breaking-down processes in both animal and plant life.

"Running in parallel lines throughout this sketch, we find these biologic principles brought prominently to the fore—just as the keystone of the arch is to architecture, the flange on the wheel to commerce, so alkalescence (of the body fluids and tissues) is the pivot or turning point between health and disease."—From Dr. Aulda's "Chemic Problems in Nutrition."

VENOUS BLOOD-PRESSURE.—An editorial writer in the A. M. A. gives the following:

"Until quite recently it has been generally assumed that venous blood-pressure passively responds to changes in the peripheral resistance within the circulation and that it rises and falls inversely to the pressure in the arteries. There is now a growing belief, supported in part by experiments on both animals and man, that the pressure in the venous system may be dominated by a special nervous mechanism. We cannot review the entire story of this chapter of the physiology of the circulation which is still far from being presented in its final form. One apparent earlier obstacle to the hypothesis of a venomotor nervous mechanism has been in part met by the now well-established demonstration that the venous system is actually supplied with motor nerves. Only recently it has been shown that the veins may respond to epinephrin with constriction, thereby furnishing

one of the evidences nowadays accepted as indicative of sympathetic innervation. As a physiologist has expressed it, although the evidence available at present is insufficient to establish definitely the existence of a venomotor system comparable to the vasomotor system proper, none of the evidence is against such a hypothetical nervous mechanism, and much of the data is impossible of explanation without such an assumption. It remains a fact, however, that no direct experimental proof has as yet been put forth. In distinction from the assumption that under normal conditions of life the peripheral resistance alone controls the magnitude of the venous pressure, Yandell Henderson has put forth the hypothesis that there is a venopressor mechanism which functions to maintain an optimum feeding pressure to the heart. This forms a part of his theory respecting the maintenance of the volume output of the heart. The newest researches of Hooker, at the Johns Hopkins Medical School, on the venous blood-pressure in man are in harmony with the existence of the hypothetical venomotor mechanism. He finds that normal venous pressure is independent of changes in peripheral arterial resistance. The capacity of a vein may vary without affecting the internal pressure. According to Hooker, the venous pressure in man exhibits a distinct diurnal rhythm, rising throughout the day from 10cm. to 20 cm. and falling again during the night. The normal venous pressure varies very considerably, averaging in the day time and under usual conditions about 15 cm. of water; in sleep, at night, it may fall to 7 or 8 cm. The study of venous pressure in man has been comparatively neglected in the past. With a renewal of interest in its problems we may look forward to some valuable contributions to the knowledge of the circulation."

NEUROTOXICOLOGY

A FATAL CASE OF VERONAL POISONING is reported by Dr. Edward W. Lazell in the Denver Medical Times for

January last, due probably to the cumulative effect of repeated doses, the moral of which is not to repeat this or most other coal tar anodynes and sleep producers often in the same day, and to administer usually but a single dose daily and then only about the ordinary time of retiring.

ALCOHOLICS AND WAR.—“Russia has discontinued the manufacture and sale of Vodka, the national alcoholic drink. France has prohibited the sale of Absinthe. Now, England comes forward with an appeal to all her soldiers to refrain absolutely from alcoholic drinks. This has been printed in the form of a poster, distributed to all the military stations. The following reasons are given why the soldiers should refrain from alcoholic drinks:

- (1) SLOWS the power to see signals.
- (2) CONFUSES prompt judgment.
- (3) SPOILS accurate shooting.
- (4) HASTENS fatigue.
- (5) LESSENS resistance to Disease and Exposure.
- (6) INCREASES shock from wounds.

It is signed by the most distinguished physicians in the British empire: Thomas Barlow, Frederick Treves, C. J. H. Evatt, Victor Horsley, G. Sims Woodhead. In addition, the statement is made that the appeal is made on the authority and experiences of Field Marshal Roberts and Field Marshal Wolsely.—*Memphis Medical Monthly*.

TWO DESCRIPTIVE CASES of Chronic Poisoning by Scopolamine Hydrobromide or Hyoscine were given by Dr. A. W. Daniel at the last July meeting of the British Medico-Psychological Association.

KILLED BY WOOD ALCOHOL.—We are indebted to the Medical Fortnightly for this item of wood alcohol fatality:

“Upward of twenty Vermont farmers died recently as the result of drinking whiskey purchased at a village drug store. The district is under prohibition regulation and the men of the neighborhood get their supply for

the Sunday booze at the drug store. The supply at this particular store was simply flavored wood alcohol, and the result is many deaths and several cases of blindness."

INHERITED DEFECTS FROM ALCOHOL.—The influence of alcohol as a detrimental factor in inheritance is one which has not readily lent itself to convincing experimental proof in the past. During the last four years Professor Stockard of the Cornell University Medical School in New York City has been engaged in a study of the effects of alcohol in heredity. He has demonstrated conclusively that the germ cells of males can be so injured by allowing the individuals to inhale the fumes of alcohol that they give rise to defective offspring although mated with vigorous untreated females. The extension of these unique investigations, in which the offspring from the treated animals which reach maturity are usually nervous and slightly undersized, have further shown that the effect of the injury of the germ cells is not only exhibited by the immediate offspring of alcoholized animals, but is conveyed through their descendants for at least three generations. There are many instances of matings followed by negative results or early abortions, stillborn young or defectives. An instructive illustration was afforded in a case in which two of the four young were completely eyeless, the eyeballs, optic nerves, and chiasma being absent. Such defects result, according to Stockard, from the injury originally inflicted on the germ cells by the experimental treatment. Yet this injury may have been received by early generations only. Thus the parents of the anophthalmic guinea-pigs just mentioned were untreated, their four grandparents were also untreated, but their great-grandfathers were all alcoholized and their great-grandmothers were all normal animals. The defective eyes of the descendants are due to impaired development, not to the direct action of alcohol. Plainly the spermatozoon is actually weakened, if not disabled, by the alcohol treatment and all individuals arising from combinations involving such a germ cell are likely to be

below normal. There is food for reflection in these facts.
—Jour. A. M. A.

NEUROTHERAPY

PITUITARY THERAPEUTICS, ETC.—“The knowledge that extracts of the anterior lobe, which is glandular in structure, are without marked immediate effects when injected intravenously, whereas extracts of the posterior lobe, which is a nervous structure, produce striking immediate results is very interesting when one considers that removal of the posterior lobe, is compatible with life, while removal of the anterior lobe terminates fatally. * * *

Wulzen has recently found that when young fowls are fed with anterior lobe substance a retardation of growth resulted. This effect was especially marked in males. * * * The most striking results have come from the administration of posterior lobe extracts. Favorable results have been reported by many from the use of posterior lobe extracts in the treatment of post-partum hemorrhage, uterine inertia and postoperative shock; on the other hand, its use in labor is in certain cases followed by grave results, rupture of the uterus being reported after the repeated administration of some commercial preparations.

The recent work from the Hygienic Laboratory by Roth of the Public Health Service on the standardization of pituitary extracts may throw some light on some of the results obtained in therapeutics. * * * He concludes that there is need for uniformity in the strength of commercial pituitary preparations, and to bring this about advocates their standardization on the isolated uterus of the virgin guinea-pig, suggesting an arbitrary standard. He further suggests that clinical studies should then be made to determine the therapeutic dosage.”—Abstracted from Ed. Jour. A. M. A., Dec. 19, 1914.

BEFORE THE BRITISH MEDICO-PSYCHOLOGICAL ASSOCIATION of Great Britain and Ireland in last July the Intra-thecal Treatment of General Paralysis was discussed by Drs. Mapother and Beaton.

Unsatisfactory results were obtained in the earlier attempts at the treatment of General Paralysis by intravenous infusion alone of salvarsan.

Attempts were made first to introduce salvarsan and neo-salvarsan, in aqueous solution, by intraspinal injection; unfortunate sequelæ led to the temporary abandonment of this procedure, in part, at least, referable to the vehicle in which the drug was dissolved rather than to the drug itself, and later attempts, with modified technique, seem to show that such accidents are not inevitable.

The occurrence of these accidents led to the substitution for a solution of the drugs of serum of patients treated with them.

This method, the one used by the authors, is described, as also are several modifications, especially those consisting in the addition of arsenical drugs to the serum *in vitro*. The relative values of these methods are discussed.

A statement is given of the results obtained by the authors and a resume of those of other observers.

Several methods of intra-cranial administration have been practiced; these and their results are described and their justification discussed.

The article concludes with a consideration of the question whether anatomical inaccessibility of the spirochæte constitutes by itself a complete explanation of the refractory nature of the disease.

A DYSENTERY "CARRIER."—Drs. Gettings and Waldron discovered the dysentery bacillus in the stools of a patient with loose motions but no other symptoms.

Her history revealed that her condition has existed since admission, four years ago, yet without giving clinical evidence of dysentery.

AMERICAN THERAPEUTIC NOTES.—The Medical Council for October last has the following of interest at this particular time, when our therapeutic resources from across the ocean are denied us by force of the European unpleasantness:

"American gelsemium takes the place of coal-tar drugs in nerve pain.

"American *cimicifuga racemosa* takes the place of coal-tar drugs in muscle pain.

"American aconite is of peculiar virtue in the treatment of the early stages of fever, especially with involved mucous membrane.

"American hellebore, or *veratrum viride*, is of especial value in the treatment of sthenic fevers, being often better than coal-tar derivatives.

"American hemp, or *cannabis sativa*, is a fair substitute for *cannabis indica*, more especially as a urinary sedative and in spasmodic conditions, or where opium disagrees.

"American *piscidia erythrina*, or Jamaica dogwood, is a useful substitute for opium, when given in full doses, especially as a cough sedative, in spasm and neuralgia and in pain with fever.

"American hops, or *humulus lupulus*, as well as lupulin, is of great value in the treatment of insomnia. It is a most valuable anaphrodisiac, useful in priapism and chordee. It also stimulates the appetite.

"American valerian, while not a narcotic, is classed as a nervine, and acts upon the spinal centers. It is indicated in the nervousness of depression, chorea and other spasmodic conditions, as well as in hysteria.

"American *ustilago*, or corn ergot, is a substitute for rye ergot, from Russia. In fact, we know its action to be excellent in uterine inertia. Then too, we have American pituitrin to use in cases of labor.

"American *xanthoxylum*, or prickly ash, is a splendid tonic in lack of nervous tone and as a general diffusible tonic, stimulating the capillary circulation. More especially is it of value in catarrhal gastritis.

"American stramonium, or jimson weed, may be used as a substitute for belladonna. Apocynum cannabinum fills many of the indications of digitalis. Crataegus oxyacantha or English hawthorn growing in America, is another heart remedy.

"American lobelia is a splendid antispasmodic. American sanguinaria, or bloodroot, is a tonic and stimulant to the bronchial membranes, much neglected because it has been given in too large doses. Asclepias tuberosa, or pleurisy root, acts nicely upon the respiratory tissues."

CORPORA LUTEA NOW THERAPEUTICALLY AVAILABLE.

—Corpora Lutea, for prescription purposes, has now been made available through the manufacturers, thereof, by Parke, Davis & Co. Corpora Lutea is largely used to control the symptoms following removal of the ovaries, and the nervous disturbances attending upon the menopause, amenorrhea, dysmenorrhea, chlerosis and menorrhagia. One writer calls it "a blessing to womankind."

THE PUMPKIN AS A DIURETIC.—An interesting and therapeutically suggestive article by A. Kakowski in the *Zeitschrift fur physikalische und diatetische Therapie*, June and July, 1914, extolling the value of the pumpkin when administered in large quantities in the treatment of nephritic edema, attracted the editorial mind of Dr. Stedman of the *Medical Record*, the substance of which he thus presents in his last Sept. 19th number with an introductory reference to oatmeal as a diabetic cure, etc.

"He finds that it fulfills the following requirements of the ideal diuretic food; it should contain considerable water and natural salts, but should be relatively free from sodium chloride; it should be well borne by the alimentary tract and should act as a mild laxative; it should have nutritive value and should be palatable; it should not irritate the kidneys and should not give rise to harmful metabolic products; and it should be easily obtainable, cheap, and easily preserved.

The edible portion of the pumpkin is prepared by Kakowski in the form of a porridge, by being cut into small pieces, covered with water, and boiled over a slow fire for two hours. It is administered to the patient with butter, milk, or cream, or preferably mixed with a rice soup. The preparation most agreeable to the patient is one in which the pumpkin is boiled with milk or with cream.

The pumpkin cure was employed in severe cases of chronic nephritis in which an edema had been rebellious to the entire range of medicinal diuretics. Long standing and massive edemas disappeared within a short time under this method of treatment. Diuresis occurred after the use only of enormous quantities of pumpkin, varying from three to six pounds per day, and in most cases directly proportional to the amount of this food that was eaten. The diuresis occurred only during the period of administration. The number of casts rapidly diminished, and the reaction of the urine became alkaline. There was no evidence of any irritating effect upon the kidneys nor of any otherwise harmful influence upon the body. In one of the author's cases as much as 252 pounds of pumpkin were administered in the course of 80 days without giving rise to any untoward effects apart from large fluid stools. In addition to its diuretic action the pumpkin is said by Kakowski to have a high nutritive value, which fact is of particular importance in the case of chronic nephritics in whom the diet is usually greatly restricted.

EXOPHTHALMIC GOITRE.—The Dominion Medical Monthly (a good judge in its selections,) abstracts from the Berliner Klin. Wochen. the following from Professor Klose:

On the increasing safety and benefit from operative treatment in this disease since resecting the thymus along with the thyroid has been adopted, or removing the entire thymus. It is now considered that the danger after thyroidectomy is due to acute intoxication from the

thymus after the thyroid is removed. It is interesting to note that at Rehn's clinic there were eight deaths from this cause alone in 130 operative cases up to 1911. Since that time there have been 200 operations where the thymus has been resected along with the thyroid, with no deaths. Local anesthesia is always used, which with the resection of the thymus has placed the treatment of exophthalmic goitre on a new plane.

THE HARMFUL CONSTITUENTS OF ROASTED COFFEE. (Coffee-toxin).—The disturbances of the digestion which follow excessive coffee drinking are considered by the author, in a communication to the Societe de Therapeutique, not to be due in any degree to the caffeine, but solely to certain volatile constituents formed, and only partly volatilised, during roasting. These are named cafeotoxin, and may be eliminated by submitting the roasted coffee to successive treatment with steam under pressure of several atmospheres, followed by exposure under a vacuum. The coffee thus treated is called "atoxicafe." It retains its caffeine unaltered. It differs from ordinary coffee only in containing less cafeotoxin. Cafeotoxin has a marked reducing action on haemoglobin, a hypotensive action on the circulation, a depressant action on the central nervous system, occasioning cardiac arrhythmia, and on the respiratory centres, causing dyspnoea.—J. Burmann (J. Pharm. Chim.)—Pacific Phar.

SIMPLE STERILIZATION OF WATER.—A French scientist, M. Dienert, has discovered that drinking-water can be completely sterilized by being placed in a vessel containing a small piece of zinc and stirred from time to time. He has placed distilled water in test tubes, with a small piece of zinc in each, and then added cultures of various microbes. After a time the microscope shows the microbes gathered about the zinc and all dead. Zinc and zinc oxide are practically insoluble in water, but the bacteria cause slight quantities of these substances to be

dissolved, probably because they secrete a small amount of some acid. The amount of zinc dissolved, however, is so small as to be absolutely harmless when taken in with the water.

The extended use of zinc and "galvanized" iron vessels as receptacles for drinking-water shows that the zinc will last a very long time. This use of zinc or zinc-lined containers works thus automatically to sterilize the water placed in them.—*Medical Herald*, St. Joseph.

THE AVITAMINOSES AND THEIR TREATMENT.—H. Stassano defines the avitaminoses as diseases resulting from a deficiency of vitamins in the diet. The vitamins are complex crystalline substances belonging to a chemical group hitherto unknown. The nitrogen is not combined in the amine radicle and can be extracted only in part by the Kjeldahl method. The characteristic syndromes of the avitaminoses are classified as follows: (1) The syndrome of degeneration of nerves with paralyses and contractures; (2) the cardiac syndrome with dilatation of the right heart accompanied by dyspnea, cyanosis and oliguria; and (3) the syndrome of anasarca, hydropericardium, hydrothorax, and ascites; all of these three syndromes belong to the group of cases properly called beriberi. (4) The classical syndrome of scorbutus. (5) The syndrome of pellagra. In all of the above conditions the following articles of diet which are rich in vitamins have been found to be of curative as well as of prophylactic value; human milk, fresh cow's milk, butter, cheese, yolk of egg, beef juice, fresh tomatoes, fresh legumes and soups containing them, fresh fruits or their juices, the sauce of stewed fruits, whole corn or wheat bread, unpolished rice, slightly roasted beef, fresh yeast, extracts and preparations of yeast, and cod-liver oil.—*La Quinzaine Therapeutique*.—*Med. Record*.

SUCCESSFUL TREATMENT OF TETANUS NEONATORUM.—The *N. Y. Med Rec.*, 8-29-14, thus presents this subject in its London letter—

"The undoubted power of magnesium sulphate as used by intraspinal injections over the convulsions of tetanus is offset by the fact that death may still occur from severe complications, which may well be ascribed in part to the paralyzing action of the drug. Attempts are naturally being made to neutralize the overaction of the magnesium. Before the Pediatric Section of the Verein für innere Medizin und Kinderheilkunde, Berlin, which met last July (*Berliner klinische Wochenschrift*, July 27) Falk reported three cases of tetanus neonatorum, seen within four months, in all of which recovery ensued. The solution of magnesium sulphate employed varied from 8 to 25 per cent. To offset the paralyzing action chlorate of calcium was injected. In discussion Finkelstein added that the duration of the disease was not diminished, but the treatment certainly prevented the violent convulsions which often terminate life suddenly and, moreover, gave opportunity to push nourishment while the jaws were relaxed. Falk stated, that feeding must be done early, and that one must be sure that the magnesium has not caused deglutition paralysis. Late feeding might set up spasms."

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Any comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or "mouths of wisest censure."

NOTICE TO NEWS AGENTS

This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffs are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

CONCERNING RENEWALS OF SUBSCRIPTIONS

This magazine would be much indebted to its regular subscribers and advertisers if they would renew by direct communication with this office, especially in the United States, and not through news agents.

CHAS. H. HUGHES, M. D., Editor and Publisher.

Editorial and Business Offices, 3858 West Pine Boul.

EDITORIAL

FREUD'S METHOD OF PSYCHOANALYTIC DIAGNOSIS is conducted under the propulsion of preconceived impression and suggestion carried to the point of hypnosis when the patient or victim of his questioning responds acquiescently to the answer sought.

The Freud method of interrogation would be considered leading in a court of justice and would be objected to by counsel and the objection sustained by a just and

learned judge. What value shall we attach to such methods of medical diagnosis?

CANDIDATES FOR ASSISTANT SURGEON in the Public Health Service will be examined for admission on March 8th, 1915 at Washington, Boston, New York, Chicago, St. Louis, Louisville, New Orleans. Applicants for invitation to appear for examination will apply to Surgeon-General, Public Health Service, Washington, D. C. Further details as to requirements can be found in the medical weeklies.

TRAINED MEN FOR STATE INSTITUTIONS.—Senator Moore's bill to take the state institutions out of the domain of partisan politics is before the Legislature of Missouri. On this *The Republic* correctly comments:

"There are branches of the public service which can be managed by any man who is competent to manage a store or a factory. Training in the ordinary walks of life is training for that kind of service. There are other branches of the public service for which no ordinary sort of private activity will prepare any man. Into this class falls the management of prisons, reformatories, asylums for the insane and schools for defectives. When positions in such institutions are filled for political reasons, no matter how good the raw material may be, the State is compelled to educate its servants at the expense of its wards. About the time the education is complete the political wheel turns and a new set of incompetents comes in to learn again what the State has just succeeded in teaching the old set. The folly of this proceeding is sufficient to condemn it, but its unfairness to the inmates of State institutions is shocking. Senator Moore's bill is intended to change this condition and to give the State the services of the men whom it must train and can rarely get in any other way than by training them."

THE NEW BARNES HOSPITAL, connected with the Washington University, is conceded to be the latest and best in all its superior appointments.

THE PHILADELPHIA POST-GRADUATE SCHOOL OF NEUROLOGY'S FACULTY is composed of the following named gentlemen: Drs. Charles K. Mills, Charles W. Burr, William G. Spiller, James Hendrie Lloyd, Charles S. Potts, D. J. McCarthy, T. H. Weisenburg, George E. Price.

Dr. Francis X. Dercum, 1719 Walnut St., Consulting Neurologist, will take part in the instruction. Address Dr. Charles K. Mills, Dean, 1909 Chestnut St., Philadelphia.

No further commendation of this advanced endeavor in the line of medical education need here be named.

IT IS ESTIMATED that the number of feeble-minded children in St. Louis is over 1000 and there is on record in the office of the Children's Aid Society the names of 410 children who need institutional care. The State institution at Marshall can only accommodate a small number of those needing care.

Dr. Johnson, Superintendent of the Institution for Feeble-Minded of Vineland, N. J., showed in a recent lecture the immediate necessity of providing care and training and medical treatment for these unfortunate children.

These unfortunates need more than training. They need treatment to put them in the best physical and sanitary condition for more favorable development, during the period of growth especially. The need all the time of their progress toward adult life, open bowels cleaned of absorbable blood impairing ptomaines, the most digestible, easily assimilable reconstructive food, ample sleep, etc. in their growing stages to atone for and remedy defective hereditary endowment, so far as may be practical, and eugenic preventive management of parents to save the yet unborn from the sequels of parental inebriety and otherwise vicious, unsanitary, degenerating lives. To avert race decadence is a big burden devolving upon the present generation, involving much more than the present day physiological enlightenment and its wise eugenic application.

CAUTION TO SURGEONS as to Lumbar Puncture where Brain Tumor Exists.

About a decade ago a warning against this practice where brain tumor was present or expected, went out from the Berlin Psychiatric and Neurologic Society, Gerhardt being the author of the warning, citing quite a large number of fatalities up to that time, (25 or 26) to which a considerable number have been added since.

Surgery may learn something here, as elsewhere, from neuro-pathological observation and advance. At the same seance eminent and cautious medical men counselled ordinary unsurgically trained general practitioners not to attempt the spinal puncture anyway, but American country practitioners may become sufficiently skilful here, as elsewhere, in sero-therapy of which spinal puncture has become an important and essential therapeutic and diagnostic practice.

WHY NOT make the present Marine Hospital and Public Health Service into a National Department of Health and put Surgeon General Blue in the cabinet of the President and Surgeon-General Gorgas there also?

THE PRIZE DISSERTATION.—The British Medico-Psychological Association offers a Bronze Medal and Ten Guineas to any Assistant Medical Officer of any Lunatic Asylum (public or private) or of any Lunatic Hospital in the United Kingdom, for the best dissertation on any Clinical or Pathological Subject relating to Insanity.

DR. C. B. BURR, Medical Director of the Oak Grove Hospital for Mental and Nervous Diseases, author of "Psychology and Mental Diseases" and noted writer for this magazine, has an interesting and instructive contribution on "Witchcraft in Certain Medical and Legal Relations" in "Case and Comment," a lawyer's magazine, for November last, which is good reading from a right and competent source of correct clinical observa-

tion for jurists or physicians and students of the human mind generally. We cordially commend it to the readers of the *Alienist and Neurologist*.

PRINCE BISMARCK was once pressed by a certain official to recommend his son for a diplomatic place. "He is a very remarkable fellow," said the proud father. "He speaks several languages." "Indeed!" said Bismarck, who did not hold a very high opinion of linguistic acquirements, "what a wonderful head-waiter he would make!"—Christian Register.

Commended to doctors who maintain that physicians should be modern linguists before being considered qualified to practice medicine. An undergraduate would be helped in his studies with at least a philological knowledge of Greek and Latin. A post-graduate physician might profit by the mastering of as many modern languages as study and practice circumstances should demand. Valuable as this knowledge is, it is not more essential than what is necessary for waiting on a table where different modern languages are spoken.

DETECTIVES FOR HOSPITALS FOR THE INSANE.—There is a good deal of human nature among attendants for the insane in these hospitals and a few get into this service who are sometimes as vicious and cussed as we see outside of these worthy institutions, necessitating detectives and police.

It is no reflection on the good attendant that this is so, any more than it is upon society in general that detectives and police are a necessity for the protection of rightly governed society. But all hospitals should have detectives for the protection of the helpless insane, for some attendants think they know best how to treat the patient, despite rules against violence towards them and occasionally show their cowardly prowess by roughly handling these unfortunates, for in their hearts the law of kindness unto them abideth not, though this law is enjoined in all good hospitals.

DOCTORS.—Please send us your best views of your patients enjoying themselves by diversion, amusement or occupation in your institutions. The chief aim of this magazine, aside from its scientific purpose, is to enlighten the profession and people as to the homelike, humane and curative features of hospitals, homes, sanitarium and sanatoria for the mentally maimed and divest the unfamiliar mind of the adverse prejudice yet prevailing in many quarters, as to the insane, and remove the unjust stigma that still attaches, in ill-informed minds, toward the unfortunate victims of mental disease.

ERRATUM.—On page 442 of Vol. 35, in line 20, for Boston read Salem, Mass.

THE ALIENIST AND NEUROLOGIST is a magazine of Psychiatry, Neuropsychiatry, Psychology, Eugenics and advanced knowledge for physicians, surgeons, attorneys, clergymen, literati and non-aligned anthropologists, criminologists and student seekers after anatomical and psychological knowledge in relation to the nervous systems and minds. \$5.00 per year in advance.

APPROPOS OF THE PROGRAM of the combined meeting of the New York Neurological Society and the Neurological Section of the New York Academy of Medicine, November 10th, 1914, shows the signs of the times in professional appreciation of neurological progress.

TRENCH CAUSED INSANITY IN THE BATTLE AREA OF EUROPE is one of the results of the present sequences of the unique rheumatism-engendering, opposing trench war now raging in Europe.

The close proximity of opposing trenches, the screeching murderous artillery, the overhead constant peril and underfoot dampness in the ditches, the wet and freezing, body-soaking and shivering weather, the sleep destroying power of the nerve and brain racking, night and day cannonading, are mutually destructive work beyond

all previous deadly, destroying deeds of war. The elements and armaments of this gigantic, unprecedented, destructive world war, making the exhaustion of all contestants only a matter of time, when the peace of mutual destructive exhaustion shall come, with its victory of mutual slaughter and enforced rest, as even now, the respective combatants must come or be taken betimes to places of rest and temporary safety from insanity, and the other wounded and dead, calamities of the most murderous war contest of all time, when peace will have her sequent victory more "renowned than war" and a rejoicing world may have seen the horrors and repair the world harm of the present unjustifiable military madness of army mustering Kings and Monarchs.

TAKING CARE OF THE BY-PRODUCTS.—During the past year a Kansas City whiskey establishment, (notes the St. Louis Republic early in the year) engaged in the "selling of mailing lists to jag cures, which illustrates," it says, "the modern tendency toward the utilization of by-products."

In this connection, may we not hope from the phlebotomy tragedy now taking place in Europe, a peace serum may be evolved which will give Europe relief from militarism and starvation? Poor suffering Belgium, poor little Servia.

THE APPROPRIATION for the sanitary protection of the five million and more of population of Illinois last year was \$30,000 less than that appropriated for the protection of the fish and game law of the State.

THE MANY HOSPITALS AND SANITARiums to which this magazine goes, prompts us to suggest that the report of the Department of Agriculture at Washington, D. C. on the "human health and the foot and mouth disease" be sent for and its suggestions followed.

AMONG THE MOST PROMINENT DECEASED ST. LOUIS PHYSICIANS last year were Dr. Ludwig Bremer, Dr. J. K. Bauduy, Dr. Washington E. Fischel, Dr. Ernst Saxl and

Dr. H. M. Post, the latter two being oculists, the two former being neurologists. All were men of mark in their several fields of work. Dr. Bremer died in Dresden, April 12th, and the others in St. Louis. The two first named were neurologists of merit and eminence.

W. B. KERN, M. D., recent Medical Superintendent Ingleside State Hospital for Insane, Hastings, Neb., is now located at 722 Baker-Detwiler Building, 412 West Sixth Street, Los Angeles.

WHEN YOU WRITE FOR THIS MAGAZINE on a matter of practice make it known on what warrant of experience you claim the attention of our readers. Do not be too modest on this subject as time is valuable and life is fleeting. Up to date the contributions to our pages have been profitable reading and we wish to always have them so. We have occasionally had to refuse manuscripts because they were not adapted to our pages, making a profitless time demand on our readers.

Drawing on the imagination and reciting therefrom as to the curability, for instance, of insanity as the non-clinical experts sometimes do in court, is a robbery of the readers' time.

THE DUAL SOURCE OF THE CEREBRO-SPINAL FLUID is in the choroid plexus and in the cerebral capillaries, according to Dandy and Blackfan, Frazier, Peet and Cushing.

Internal hydrocephalus was produced by Frazier and Peet by blocking the Sylvian aqueduct. It may also be a cerebral perivascular space sheath excretion. The internal nutrient bath of the arteries and cord and the external bath of the nerves. (For elaboration see Jour. A. M. A., 12-19-14, p. 232.)

WITH THE PRIVILEGE OF CITIZENSHIP in a Republic should be allied a right appreciation of *meum* and *teum*, i. e., a fair-play regard for your neighbor's rights to

quietude, sanitation and comfortable isolation of his home from the noise, bustle and other annoyances of city life. He is entitled to the protected personal right to rest and sleep, if he provides for it in a secluded home. His front yard, if he legally possess it, and the private street by his premises, if he provides it and not the city, is his for enjoyment.

Yet a citizen, who ought not to be a citizen of a free fair-play government, proposes, in a city of a free state, to pull down the gates of a privately owned place, without public necessity or legal condemnation and compensation, not especially needed for public uses. Such a man has the spirit of the autocrat rather than the democrat and ought to seek an unlimited monarchy for his residence where "might makes right."

"A man's house is his castle" and this includes his grounds and the road he makes to and by it. His comfort and his health and his family's are to be respected. His front yard and the street he makes in front of it he owns and considers its privacy necessary to his comfort and health and pleasure is his to control, even in monarchical England and Germany, which are freer in some respects than in this "land of the free," from the tyrannically minded members of some of our "free and equal" legislators.

The constitutional guarantee of "liberty in the pursuit of happiness," subject only to rational restraint against evil and harm to others, will always be regarded by our highest courts.

PAPINE (Battle & Co.) is said by the Council on Pharmacy A. M. A. to be a simple aqueous alcoholic solution of morphine, containing one grain to each ounce and exploited under the utterly unwarranted claim that it does not nauseate, constipate, nor create a habit.

Disprove this, gentlemen proprietors, or withdraw from the medical patronage market.

RHEUMATISM AND RHEUMATOID INSANITY will be not the least of the trench fighting sequences of the present

remarkable war in Europe and no specially coined German name will alleviate the misery of this cruel infliction of monarchical antagonism.

A CASE OF HEREDITARY PERSISTENT SUICIDAL IMPULSE is under observation and restraint in the St. Louis City Hospital. The young man is eighteen years of age. His morbid impulses have recurred at frequent intervals since early childhood. He is comely and intelligent in appearance, of medium height, without cranial, facial or other physical deformity. His father suicided five years ago and his mother two. His name is Raymond Broemser.

CONSIDERATE KINDNESS TO THE INSANE.—While every hospital for the insane has printed rules against handling of patients and so far as practicable, enforces kindness as the rule of such institutions, the utmost vigilance by officials thereof does not always prevent a certain few brutally-minded and often extremely ignorant and smart-Alex attendants, from trying methods of their own clandestinely on the unfortunately refractory patients. An instance in proof came to light recently in a distant state hospital, where an aged dement was strangled and beaten to death by a trio of the brutal, smart-Alex sort of attendants, because he did not know enough to stay in bed and go to sleep at the command of his supposedly sane nurses. Thus this cruel criminal trio "fixed" (as they called it) this poor lunatic by crushing the life out of him. Such brutality deserves the halter or electric chair.

He stayed in bed after the beating they gave him because he could not get out and a few days thereafter he stayed in his coffin, without even turning over. Unceasing vigilance and rigid discipline against cruelty in behalf of patients is the price of justice to the insane of every State insane hospital. They demand a higher order of disciplinary judgment and charitableness on the part of medical attendants than they sometimes get, especially where positions are the rewards of political affiliation and service.

THE CARNEGIE EUGENIC COMMISSION, at Cold Spring Harbor, L. I. have decided to take up the question of alcoholic heredity and make a scientific study of it. A trained worker has been assigned to Walnut Lodge Hospital, Hartford, Conn., to make exhaustive researches under the direction of Dr. T. D. Crothers, the Superintendent. This institution has been thirty-five years receiving and treating cases, and the records of these number many thousands. The object is, to determine something definite from these facts on the great questions of alcohol and heredity.

LES MEDICINS HUMANISTES.—A society of this name has been organized in Paris, with the object of uniting physicians who are interested in literature in its relations with biological sciences, to advance in every possible way the revival of the study of Greek and Latin, and to bring about a reaction against neglect of the humanities in all curricula preliminary to the study of medicine. At the meeting of February 23rd, Dr. Berchon, the secretary of the society, gave an extensive resume of Dr. A. Rose's book, "Medical Greek," which resume will appear in the journal of the society. In *La Chronique Medicale* of April appeared an interesting review of this book for which we regret we have not space in this issue. But the *American Practitioner*, New York, May, 1914, gives the conclusion.

DR. ACHILLES ROSE.—"Among men who achieve" an idea, and persist in bringing it to our attention, is this physician, native of the German Empire, visitor and student among the Greeks, and, now, resident of New York. A. Rose is interested in purifying our scientific terminology, regarding Greek derivations, so that modern Greek shall find our use of it correct. When we go to Paris and read of "bif-stek" or "bouledog" we appreciate in part the feelings of an outraged Hellenist. Dr. Rose wishes us to remember that Greek still lives, and is spoken. It, to him, as to many others, offers an excellent

means of general communication. As our terms are often coined by inexperienced men, his idea of harmony and correctness seems to the point. We certainly ought not to form words which would cause an Athenian to doubt his own ears and his native tongue."

Thus T. H. E. writes in the Medical Fortnightly of this eminent Greek scholar and enthusiast for pure Greek in medical nomenclature wherever terms are derived from this classical language.

DEATH OF DR. JEROME K. BAUDUY.—"For many years up to some six or eight years ago one of the most notable figures in the St. Louis profession was that of Dr. Jerome K. Bauduy, a man prominent professionally, intellectually, socially and as a teacher; one of the men who made the Old Missouri Medical College the power which it was. Though still in practice and still teaching it was generally recognized during the later years of his St. Louis residence that his health was not good, his disappearance from among us caused little comment until it became prolonged, it took considerable inquiry to discover the fact that he had gone to a sanitarium in western New York, in which institution he spent the remaining years of his life. His death took place on October 16, and his burial was from St. Francis Xavier's church in this city on the 19th. He was 74 years of age. For a quarter century Dr. Bauduy was physician-in-chief at St. Vincent's Asylum and held chairs in nervous diseases and medical jurisprudence in the Missouri Medical College, and later at the St. Louis Medical College of Washington University. He served under Rosecrans in the Civil War. He was the author of many treatises on nervous and mental diseases and testified as an alienist in the famous Duestrow murder trial. He was born in Cuba and was educated at Georgetown University, the University of Louvaine, Belgium, and received the degree of doctor of medicine from Jefferson Medical College, Philadelphia. The vast body of physicians who knew Dr. Bauduy as students under him, and those who knew him as fellows in prac-

tice will be profoundly grieved that the long silence is broken only by word of his death."

Thus records the Medical Fortnightly of our long time friend and genial, talented and meritorious physician, whose demise so many men of medicine mourn. His was a kindly and genial personality.

MEDICALLY ENLIGHTENING THE PUBLIC—The following items from the same front page of a daily newspaper show how the public is being enlightened and incidentally shows the newspaper appreciation of the same, especially since Osteopaths are not physicians and whose very name is an illiterate misnomer, osteopath, meaning, from its derivation literally, a bone disease or a bone diseased condition or person:

NOTED OSTEOPATH TO SPEAK

"Osteopathic physicians and surgeons of St. Louis and vicinity will observe "Osteopathy Day" next Friday. Dr. R. Kendrick Smith will give a popular public lecture in the evening in the blue room of Hotel Buckingham. The lecture will be preceded by a banquet.

"Dr. Smith at noon the same day will be the speaker at the City Club luncheon. In the afternoon he will hold clinics at the scientific session.

"Dr. Smith is director of the department of public health and education of the American Osteopathic Association and is on a lecture tour of the West. He is the author of many magazine articles. Dr. Smith is president of the Boston Browning Society."

FREE LECTURE ON ADENOIDS

"The fifth lecture on 'Preventive Medicine,' free to the public, under the auspices of the Social Service Committee of the St. Louis Children's Hospital, will be given in the lecture hall, 600 South Kingshighway, at 3:45 o'clock Tuesday afternoon, by Dr. Greenfield Sluder, on 'The Ear, Nose, and Throat.' Dr. Sluder will treat in detail the problem of tonsils."

The newspaper's preferable appreciation of the "quack" shown here as to space allotted is suggestive.

INSANE MURDERERS ACQUITTED on the ground of insanity and set free on the ground of a jury's diagnosis of recovery at the close of the trial, should be given the benefit of the doubt as to permanent recovery, by a supplemental verdict of indeterminate insane asylum sentence for further observation, as in the case of Harry K. Thaw. *Safety first.*

There is such a brain disease as recurrent transitory mania which true psychiatric experts with right clinical experience recognize. As a matter of sound public policy medical men who pose as experts and testify before courts in such cases should only do so by warrant of ripe and right clinical experiences with the insane and not testify from their inner consciousness only as to what they think may constitute insanity and recovery.

CORRESPONDENCE

THE BRAVEST THING I EVER DID.—My parents now live in a town in which is located one of the State Hospitals for the Insane. On the occasion of my first visit to them in their new home, we went one day to visit the Institution. I took with me my little daughter, Marjorie, aged two and a half years.

On our arrival we were impressed with the extreme beauty of the grounds, but a sight of the poor benighted creatures staring vacantly at us, marred the beauty and cast a gloom over our spirits. On entering the main building we were taken in charge by a capable looking matron, who piloted us off on our tour of sightseeing. While we were still on the first floor I chanced to glance upward, and there on an open landing two stories above us, was a woman staring intently at some object below. She was muttering strangely and making deep swooping motions with her arms, like a chicken hawk swooping for its prey. I turned to see what was attracting her attention and discovered that it was my wee Marjorie who had wandered apart from us. I hurried to her and brought her back, mentally resolving not to let go her hand while we were in that place. I related the incident to my companions and the matron said, "Poor Meg. She lost three children in a fire that burned out an entire block in which her house was situated. She has been here ever since. Children have always had a peculiar fascination for her. We never leave her alone with one."

When we had arrived on the third floor Marjorie complained of weariness and refused to go on. So my parents went on with their guide and she and I sat down

on a settee near a window. She sat there for a few minutes, Marjorie contentedly munching some cookies and I became interested in watching some of the inmates working in the garden below. After a time I became aware that Marjorie was not beside me. A nameless fear seized me and I started up calling, "Marjorie! Marjorie!" A little voice answered, "Here me, mama!" I followed in the direction from whence it came, and found myself on the landing which I had seen from the first floor. And there sat my baby on the lap of that insane woman!

She was eating a stick of dirty looking candy, while the woman was fondling her face, hair and hands and kissing her hungrily. I rushed forward with a cry of horror and attempted to take her, but the woman evidently reading the loathing in my face, hugged the child to her breast and leered maliciously at me. Strangely enough Marjorie clung to her and showed no desire to come to me. Suddenly the woman arose, walked to the railing, grasped Marjorie by each little arm and swung her out into space, twenty feet above the first floor. Then she turned to me and said in a voice of awful earnestness, "Go! or I will drop your baby down, DOWN, DOWN!" Oh, the torture of that moment! My heart seemed to die within me. Then a feeling of wonderful calm possessed me. I sensed the danger of opposing this crazed creature. With a prayer on my lips, I turned and walked away. As I think of it now I marvel at the strength that was given me for that act. Then it occurred to me to sing. I seemed to remember having heard of the power of song in subduing a lunatic. I began to sing as clearly and evenly as my overstrung nerves would allow. I have never been able to recall what I sang, neither had I any consciousness of it at the time. After what seemed an eternity to me I heard the patter of Marjorie's little feet behind me accompanied by the heavier tread of her captor. I walked slowly and went steadily on with my song. Then out from a side corridor into the main one stepped my father, mother and the matron. I whirled, grasped Marjorie

before the watchful woman was aware of my movement rushed forward, thrust her into my father's arms and then did the most womanly thing possible—fainted.

ELSIE R. CAMPBELL, Ireton, Iowa.

We give place to this to show the outside view, in some minds, of the inside of a hospital for the insane by a visitor novice. It is exceptional for patients like the above, with delusions concerning children, to be accessible to little children unaccompanied. This child might have been conducted. Though the child might have gone with safety through half the halls of a modern hospital for the insane unaccompanied, it was not wise to let so little and helpless a child loose from the hand of a guide or guardian.

The so-called horrors of the average insane hospital as now conducted, with the insane classes separated and classified, is not much of a place of horror. Many blankly staring demented are not personally unhappy, but some are in fact happy in their fatuity; others, not so gravely demented are often extremely happy in their delusions, even happier than in the days of their sanity.

Some overwrought emotion and imagination appears in the above relation which would have been dissipated after further familiarity with the insane. The correct interpretation of insanity in its many manifestations is a matter, mostly, of expert experience. We wonder how and where this lady learned of the existence of the *Alienist and Neurologist*.

The lady is right about the influence of song upon the insane. Sweet song, like pleasing instrumental music, hath charms to soothe the insane as it does the savage and is one of the instrumentalities of cure in our modern hospitals, as well as the dance for dancers.

FATAL ACCIDENTS FOLLOWING THE INJECTION OF ANTIMENINGITIS SERUM.—Continuous Warm Bath for Phymatiasis and Other Infections.

To the Editor:—Referring to Dr. Kraemer's article under this title published in the New York Medical

Journal, June 20, 1914, I beg to quote from my paper, *The Continuous Warm Water Bath the Rational Remedy in Phymatiasis and Infectious Diseases in General.*

"The power of the continuous bath of eliminating products of infection can further be demonstrated by its application in cases of cerebrospinal meningitis. The literature concerning serum treatment in this disease has assumed formidable dimensions, and the enthusiasm over this new method is so great that it appears to be a bold undertaking to speak of another remedy in place of the antimeningitic serum, as it is called. However, the enthusiasm may subside and the rational and safe remedy, which we have in the continuous bath, may be considered.

"Strange to say, this carefully prepared paper, in which I gave the physiological explanation of the action of the continuous bath, and which was published in 'International Clinics' II, 23, none of our American medical journals, with one exception, has noticed, while a German translation was reviewed in German medical periodicals. Having mailed ten thousand copies of the original English version, I received many letters of acknowledgment and approval from distinguished colleagues, but remarks of mine on the still much advertised Flexner serum were not accepted for publication."—
A ROSE, M. D.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

MENTAL MEDICINE AND NURSING for use in Training Schools for nurses and in medical classes and a ready reference for the general practitioner, by Robert Howland Chase, A.M., M.D., Physician-in-chief Friends Asylum for the Insane; late resident physician, State Hospital, Norristown, Pa.; Member of the American Medico-Psychological Association; Member of the Neurological and Psychiatric Societies, Philadelphia. 78 illustrations. Philadelphia and London, J. B. Lippincott Company.

This is one of the very best and most practical books for the purpose designed by the author, that has come to our editorial sanctum during the past year. It is written by a psychiatric physician of adequate clinical experience, as an introduction to the study of mental diseases and it will not disappoint the student, the nurse and even the general practitioner in the plain essentials of mental and nervous conditions and their management and treatment.

The illustrations of types of mental disease and the anatomical showing of the principal nerve centers and tracts are clear and fully instructive for the beginner in neurology.

Among the illustrations is one of an insane woman burned as a witch in Scotland in 1773, as was done in our own Mass. at Lynn, when this sort of superstition warped the minds of the people, also a heavily manacled man in a bare cold cell where he had been confined for years in happy contrast with which appears also an illustration of our own modern and humane provision for both indoor and non-restraint recreation and light employment. Also a copy of the painting of Pinel liberating the chained

lunatics of Salpetriere in France, twenty years after the Scotch witch burning popular craze.

The introductory to nurses about artificial feeding and the general care of the insane are thoroughly sound. The price of this good book could not be mis-spent.

RADIO-ACTIVITY.—By Charles R. Stevens, Broadway Pub. Co., New York. Since the new era of radio-activity has come this little book is of special value to all therapeutists. It is full of valuable fact and suggestion.

CONTRIBUTIONS FROM THE PHYSIOLOGICAL LABORATORY OF THE MEDICO-CHIRURGICAL COLLEGE of Philadelphia, by Isaac Ott, A.M., M.D. Member of Amer. Physiological Assn., Amer. Soc. for Pharm. Ex-Pres. Amer. Neurol. Assn., Phila. Med. Club., Phila. Neurol. Soc., etc., etc., and John C. Scott, M. D., Lecturer on Exper. Physiol.

This is part 20 of Ott's Contributions to Physiology for 1914 and a very interesting and instructive report it is.

Dr. Ott is one of the foremost of American biological investigators and discoverers. This report with that of his able colleague, Dr. Scott, shall claim our attention in a subsequent issue.

Besides the valuable contributions of this brochure on the effects of animal extracts and internal secretions on the thyroid, the corpus luteum, the spleen, pancreas, sections of the vagus, sympathetic, etc., these contributions include portraits of Brown-Sequard, Perkinje and addresses on both. Every reader of the *Alienist and Neurologist* will read the whole with interest and profit.

HAS THE OLD MAN THE RIGHT TO LIVE? By J. Martine Kershaw, M. D., St. Louis.

This author answers, he has. It is a pathetic anti-euthanasia plea. It justly maintains that the medical profession is with him. Euthanasia may be simply therapeutic and not fatal. It should stop at physiological analgesia and never go farther. All other euthanasia is heartless murder.

THE PROGRAM OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION for its late meeting at Baltimore came to us with the handsome and benign face of its president, Dr. Carlos F. MacDonald, gracing a frontal page.

An interesting practical program on prevalent psychoses follows, including the all important venereal states, the spirochetæ-pellidæ in parietic brains, the equally important relations of internal medicine to psychiatry (and we would suggest, vice versa, for the next meeting). A criticism of psychoanalysis, eugenics, general paralysis, its pathology and diagnosis and a symposium thereon, eugenics applied, insanities in children, brain finding in manic-depressive subjects, cerebellar tumor. Abderhaldendicyclisis in psychiatry, the prevention of suicide, the psychopathies of children. The Establishment of Training Schools for Attendants for the Insane, by W. D. Granger, M.D., New York, Report of Com. on Psychology in Medical Schools by E. Stanley Abbot, M.D., Waverly, a Report on Five Cases of Intra-cranial Injection of Auto-Sero-Salvarsan and a number of other questions for discussion came up at this instructive meeting.

BERGER'S DIAGNOSIS OF CARDIO-VASCULAR DISEASES is an instructive pocket brochure published and sent out by the Sultan Drug Co. of St. Louis.

It is a condensed, epitomized treatise on the principal disease included in the caption. The text, as the author states in his preface, is simple, concise and destitute of ambiguity. Common-sense, clinical facts and useful drawings characterize the text and illustrations.

By the same author and from the same publication source is "An Epitome of the Diagnosis of Nervous Diseases Including Bromide Therapy."

The text and illustrations are reliable. This little manual is not detracted from by the commendation of Peacock's Bromides, nor by the attestation of the several analyses from reputable chemists.

JOURNAL OF PSYCHO-ASTHENICS, Nos. 1, 2, 3, 4., Vol. XIII.—The only periodical in the English language of general circulation devoted exclusively to the interests of the Feeble-Minded and of Epileptics. Published under the auspices of the American Association for the Study of the Feeble-Minded. Officers: President, W. N. Bullard, M.D., Boston, Mass.; Vice-President, Miss Mattie Gundry, Falls Church, Va.; Secretary and Treasurer, A. C. Rogers, M.D., Faribault, Minn. Subscription \$1.00 per annum; single copies, 30c. Address communications to the Journal of Psycho-Asthenics, or to Dr. A. C. Rogers, Faribault, Minnesota.

These are the only numbers of this interesting magazine we have seen. Its table of contents interested us as valuable and practical but the numbers disappeared from our office mysteriously shortly after they came to our editorial notice.

We should like to see more of it. We recall an especially valuable article in the number we saw on Epileptic Dementia, Imbecility and Idiocy, by Wm. T. Shananhan of Sonyea, N. Y., especially interesting to alienists.

THE JOURNAL OF EXPERIMENTAL MEDICINE, edited by Simon Flexner, M.D., Vol. XIX, No. 2, 1914, New York, Rockefeller Inst. for Med. Research came during our absence from the city last year and escaped acknowledgment and notice. It is a well written and illustrated volume showing mostly the transplantability of adult mammalian tissue in simple plasma, the behavior of elastic tissue in post-foetal occlusion, the pathology of epidemic poliomyelitis, intra-spinous infection in experimental poliomyelitis, epidemiology of poliomyelitis, studies in tissue specific, etc.

This work is indispensable to the searchers after light in medicine and justifies the grand conception and great outlay of the great and distinguished philanthropic founder, Rockefeller, of the institute that bears his worthy name.

PSYCHOLOGY IN DAILY LIFE.—By Carl Emil Seashore, D. Appleton & Co., New York and London, with an introduction by Professor Jashow of the University of Wisconsin. \$1.50 net, by mail \$1.62.

This volume represents the general purpose of the conduct of mind series which is, to present the several aspects of mental affairs which are involved in the regulation of practical interests. The volume comprises a selection of illustrative material with their interpretation and serves as an introduction to the study of psychology.

It deals with play, illusion, mental measurement, mental health and mental efficiency. The illustrations are typical of the problems of psychology and at once suggest how completely the issues of our daily life are conditioned by the psychological basis. The work is free from technical terms and presents a fresh and original arrangement of the material characteristic of modern interest in the laws of the mind. The chapter and illustrations of illusion are unique. The latter from Frazer.

IMPLANTATION OF THE GENERATIVE GLANDS AND ITS THERAPEUTIC POSSIBILITIES.—Successful auto-implantation of a testis from a subject dead twenty-four hours. Other successful implantations of testes and ovaries from dead subjects. Experimental implantations in various conditions, and cross implantation of testes and ovaries taken from dead subjects. By G. Frank Lydston, Chicago, formerly Professor of genito-urinary diseases and syphilology, Med. Dept. State Univ. of Ills. From the New York Med. Jour. for Oct. 17, 24, 31, Nov., 1914.

This contribution by the distinguished author of the "Diseases of Society" and "Degeneracy," "The Blood of the Fathers", etc., the eminent genito-urinary surgeon of Chicago who presents here the most practical and probably the most epoch-making contribution to the literature of our time on the glandular physiology and surgical therapy of the testes is uniquely entertaining to the student of sex gland therapy and the alienist and neurologist.

The early stages of locomotor ataxia, paresis, chronic inebriety, dementia praecox, senility, etc. improved, corrected or cured by sex gland transplantation as demonstrated and maintained by the author can not fail as the author asserts it to be of so great an advantage in therapeutics, as to relegate certain gland extracts to the dead member, soon supplanted by living extracts administered continually via the implanted gland tissue.

"THE RED MAN," a Carlisle Indian School illustrated publication, whose purpose is to train Indians as teachers, home makers, mechanics, and industrial leaders either among their own people or in competition with whites, comes to us often enough to keep us reminded of the rights of these red men of the plains and reservations and of their wrongs at the hands of a too little vigilant government.

This school, founded in 1879 and first appropriated for by Congress in 1883, is a meagre atonement by the Government of the United States for its long neglect and ill treatment permitted against the Indian by heartless white robbers in the past.

Fortunately, the red men are beginning to receive better and more just treatment. The results of this school are that its graduates are becoming leaders and teachers among their people as Government supervisors, superintendents, etc., in Government schools and good home makers, successful in business, the professions and the industries.

But the government should circumvent the white rascals who rob and ruin these wards of the Nation. The Indian makes better material than many of the foreign devils who are coming among us of late from abroad.

ST. LOUIS HEALTHY.—From comparative mortality tables it will be seen that there is only one other city that has as low a death rate as St. Louis, and it is hardly to be doubted but that if the population figures of cities were

accurately given, St. Louis would stand at the head of the list with the lowest death rate (Comptroller's Rept. city of St. Louis, 1914.)

The comptroller is certain that there is no other large city in this country which has as fine a water system at so small a cost as St. Louis.

He might add: the water is also aseptic as the Health Board says. Comptroller Player also thinks the St. Louis public schools compare favorably with any and the school building group is equal to the best anywhere.

THE ANNOUNCEMENT OF MEMORIES OF MY YOUTH, 1844-1865, by George Haven Putnam, comes with a handsome soldierly portrait of this then young officer before he was brevetted major in the Civil War service.

This gentleman is described as holding the most unique international place among book publishers. This announcement bears a list of eleven different books by the distinguished author and member of the great publishing house of G. P. Putnam's Sons.

This autobiography and the book on Abraham Lincoln ought to enlist the interest of the Loyal Legion and soldiers of the American Civil War and the subjects of all the entire eleven suggest popular interest and appreciation. G. P. Putnam's Sons, 2-4-6 W. 45th St., New York, N. Y.

SURGERY OF THE ILEOCECAL VALVE.—A method of repairing an incompetent ileocecal valve and a method of constructing an artificial ileocolic valve; by J. H. Kellogg, M.D., Battle Creek, Mich. From *Surgery, Gynecology and Obs.*, Chicago, 1913.

Since the interabdominal and interthoracic surgery through Listerism have become practical intervisceral areas have long ceased to be the terra incognita our forebears regarded them. We no longer seal up penetrating abdominal wounds and by watchful waiting leave results to Nature. Our best surgeons go in and remedy as in the case here considered and remedied.

THE CERTIFICATE IN PSYCHOLOGICAL MEDICINE for
Great Britain's Medico-Psychological Association.

1.—Candidates must be at least twenty-one years of age.

2.—They must produce a certificate of having resided in an Institution for the treatment of Insanity (affording sufficient opportunity for the study of mental disorders) as a Clinical Clerk or Medical Officer for at least three months, or of having attended a course of lectures on insanity and the practice of an asylum (where there is clinical teaching) for a like period, or they shall give such proof of experience in lunacy as shall, in the opinion of the President, be sufficient.

3.—They must be registered under the Medical Act (1858) before the Certificate is bestowed.

4.—The examination is to be held once a year, at such times as shall be most convenient, in London, Scotland, and Ireland.

5.—The examination to be written and oral, including the actual examination of insane patients.

6.—The fee for the examination is to be fixed at three pounds and three shillings to be paid to the Registrar.

7.—Candidates failing in the examination to be allowed to present themselves again at the next and subsequent examinations on payment of a fee of one pound and one shilling.

8.—The Certificate awarded to the successful candidates to be entitled "Certificate in Psychological Medicine of the Medico-Psychological Association of Great Britain and Ireland."

9.—Candidates intending to present themselves for Examination shall give fourteen days' notice to the Registrar, stating in which division of the United Kingdom they propose to be examined.—From the Journal of Mental Science.

Something of this sort should be provided for by the American Medico-Psychological Association and by State laws of those who would seek medical positions in our State hospitals for the insane.

THE NERVOUS SYSTEM AND ITS CONSERVATION.—By Percy G. Stiles, Instructor in Physiology in Harvard University; Instructor in Physiology and Personal Hygiene in the Massachusetts Institute of Technology. 12mo of 229 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1914. Cloth, \$1.25 net.

This is a valuable contribution to the clarifying of much connected with the nervous system in the explanation and understanding of the phenomena of health, diagnosis and disease by the practitioner of medicine as well as the philosophical observer of the human frame in action, normal or morbid. The author intelligently presents and discusses causes of nervous impairment.

The author's views of sleep and neurasthenia are interesting as well as on the question of fatigue, the neurovascular system and the chapters on the cerebrum and human development of this organ and the life of the individual, dreams, emotion, etc., the elements of nerve physiology, the neuro-muscular system, fatigue, etc., but not so materially different from current physiology, though tersely and forcefully shown, to justify reproduction here.

The author introduces the plethysmography in his study of sleep and numerous plain anatomical illustrations of the nervous system easy of comprehension by even a novice in anatomical science and physiology. Teacher, physician or anyone might profit by reading this valuable book.

A PROGRAM OF PRACTICAL MEASURES FOR MENTAL HYGIENE WORK.—An address delivered before the Mass. Soc. for Ment. Hygiene. By Hy. R. Stedman, Brookline, Mass. Boston Med. and Surg. Jour.

A pertinent, practical and sympathetic paper which should have the consideration of superintendents of hospitals and trustees thereof; also alienists, philanthropists and physicians.

ARCHIVOS BRASILEIROS DE MEDICINA.—Professor Juliano Moreira, Director, Rio de Janeiro.

FROM AN EDITORIAL ON GORGAS in the Jour. A. M. A. in the Southern Practitioner we reproduce the following:

"In the year 1912, 838,251 deaths from all causes were reported in the registration area, which comprises only 63.2 of the total population of the United States. There were then approximately 1,400,000 persons who died in our country in the year 1912. It is estimated that at least one-third of them, or more than 450,000, died needlessly of diseases that could and should have been prevented. Pneumonia alone caused the death of 79,917 in the registration area and at the same ratio for the entire United States approximately 125,000 died of this disease, which the average person does not regard as preventable, and which our government has done nothing to prevent, yet on the Canal Zone among the negro employes the death rate from pneumonia was reduced from 18.74 per thousand in 1906 to 1.30 in 1912. Of course, it is not possible to control the housing and other environment of the inhabitants of the United States as was done with the laborers working on the Panama Canal, and we could not hope to reduce the death rate from pneumonia and other diseases as low as reported by Surgeon General Gorgas, but hundreds of thousands of lives of good American citizens could be saved if we even approximated the sanitary measures employed in the Canal Zone."

THE PSYCHOLOGICAL MONOGRAPHS, edited by James Rowland Angell, University of Chicago. Howard C. Warren, Princeton University (index). John B. Watson, Johns Hopkins University (review) and Shepherd I. Franz, Govt. Hosp. for Insane (bulletin), comes to us from the University of Iowa, Studies in Psychology, No. 6, edited by Carl E. Seashore and put out by the Psychological Review Company, Princeton, N. J. and Lancaster, Pa. Agents: G. E. Stechert & Co., 2 Star Yard, Carey St., W. C.; Leipzig (Hospital St., 10); Paris (76 rue de Rennes), are before us. They will be found of much interest to the psychologist.

JAHRESBERICHT UBER DIE LEISTUNGEN UND FORTSCHRITTE AUF DEM GEBIETE DER NEUROLOGIE UND PSYCHIATRIE IN VERBINDUNG MIT Dr. Adler, Berlin, Dr. Bary, St. Petersburg, Prof. Dr. V. Bechterew, Pedrograd, Walter Berger, Leipzig, U. F. A. Herausgegeben von Dr. E. Flautau und Dr. L. Jacobson in Berlin Redigiert von Prof. Dr. E. Mendel in Berlin. Verlag Von S. Karger, Berlin.

We have not for a long time seen a copy of this wonderful German and cosmopolitan review of the literature of neurology and psychiatry, the most remarkable and complete review of mental and nervous maladies and allied sciences extant. We wonder that so valuable and complete an annual review is not translated and published in the English language.

The book does justice to American psychiatry, neurological and psychiatric medical writers, especially to collaborators and original contributors to the *Alienist and Neurologist*.

We hope the war will not prevent its reappearance in the year 1915. There is too much of value in it to be lost.

ISTITUTO DI CLINICA DELLA MALATTIE NERVOSE E MENTALE E DI ANTROPOLOGIA CRIMINALE DELLA R. Università di Catania diretto dal Prof. G. D'Abundo. Affezione del cono midollare in seguito a rachistovaineizzazione, pel Dott. Eugenio Aguglia, Assistente.

Professor Abundo is an author of merit, abundantly able to do all that he announces his ability to do and to verify all the asserted facts he sets forth.

Students of Italian literature in neurology (and it is rich and meritorious from many sources) will be greatly interested in this monograph of the distinguished author and his conclusions. The *Alienist and Neurologist* is and has been much indebted to Abundo and his confreres in neurology for valued contributions to the literature.

This record is a case especially adapted to spinal galvanization.

THE CONTINUOUS WARM WATER BATH THE RATIONAL REMEDY IN TUBERCULOSIS (PHYMATIASIS) AND INFECTIOUS DISEASES IN GENERAL.—By A. Rose, M. D., New York City. From International Clinics.

The author contends with confidence and enthusiasm for the value of his procedure, giving illustrative cases and interesting record at variance with correct record of priority in the use of this simple and valuable therapeutic method in various diseases.

It has been found of great value in subduing maniacal excitement in hospitals for the insane, correcting insomnia, etc. We saw it in successful use in Budapest and Vienna and think it might prove valuable in overcoming madness in the so-called sane over there at the present time. Even the cold bath for friend and foe with a hose would prove salutary if the process could be generally distributed even as far as Berlin and over the wild armies in Belgium. Dr. Rose offers the term "phy-matiasis" for tuberculosis.

SCIENCE FOR DECEMBER, 1914, has a first page *et seq.* article on "The Future of the National Academy of Sciences" which all interested in the progress of science in the U. S. should read. The paper on "National Academies and the Progress of Research," of which this is part third, was presented at the Baltimore convention in 1913 and by action of the Council a copy was sent to each member by the home secretary "for criticism and comment."

REVUE DES SCIENCES, PSYCHOLOGIQUES, ETC.—Par J. Tastevin et P. L. Couchard, Paris, has not been received since July and Sept., 1913.

We should be glad to receive all the numbers and to exchange regularly.

REVUE DE MEDICINE, REDACTEURS, Profs. L. Laudouzy et R. Lepine, is not coming regularly. The last number received was number 9, trente trois ans.

We should be pleased to exchange regularly.

ZUR BEHANDLUNG DER SEXUALEN NEURASTHENIE.— Von A. Eulenburg in Berlin (Sonderabdruck aus der "Zeitschrift für Sexualwissenschaft." I. Band. I. Helf. 1914.)

Whatever this distinguished, observant author writes is worthy to be read and this abstract is no exception. The world is his attentive audience in the fields of psychiatry and neuriatry. In fact the magazine from which this abstract is taken is the Internationales Centralblatt für die Biologie, Psychologie, Pathologie und Sociologie des Sexuallebens and is also the Offizielles Organ der Artlichen Gesellschaft für Sexualwissenschaft und Eugenik in Berlin, the editors of which are Professor Dr. A. Eulenburg and Dr. Iwan Bloch, both of Berlin and published by A. Marcus and E. Webber's Verlag at Bonn.

ACUTE POLIOMYELITIS (Heine-Medin's Disease).— By Dr. Ivan Wickman, Stockholm, The Nervous and Mental Disease Monograph Series, No. 16, New York.

Among the many valuable copies of the Nervous and Mental Disease series that have come to us is Number 16, on Acute Poliomyelitis by Ivan Wickman of Stockholm, which we cordially commend to the consideration of the readers of the *Alienist and Neurologist*.

This is an authorized English translation and is well-done by Drs. J. Wm. and J. A. M. Malony, F. R. S., Edin. The text is entertaining reading and the illustrations are unique. The Jour. of Nerv. and Ment. Diseases publishers continue to place the medical profession under renewed obligations in publications such as this and the publications preceding.

PSYCHIATRY.—A new contribution to the study of Dementia Paralytica in Brazil, by Professor Dr. Juliano Moreira, Direct. of the Natl. Hosp. for the Insane, Rio de Janeiro.

This is an interesting showing from the standpoint of clinical observation in Brazil not materially different from those of other countries.

"THE STORY OF BETHLEHEM HOSPITAL," in London, gives a history of more than six centuries, showing the attitude of society through this whole period toward its insane poor and the benefactions of this venerable venture in line with the charitable impulses of civilized humanity.

At the present time a great deal of attention is being given with a view to remedying abuses which unquestionably exist.

Readers of this magazine can not fail being interested in this remarkable record of well meant effort for the welfare and care of the unfortunate insane. The illustrations are unique and interesting. This wonderful book will receive further notice from us in a later issue, suffice it to say that every alienist should have it in his library; it is indispensable to any one who would be posted in the history and early management or mismanagement of the insane. E. P. Dutton and Co., 681 Fifth Ave., New York, are the publishers and the price is five dollars net.

THE MEDICAL PICKWICK, Vol. I, No. I is before us. We hope to see more of it. It is the funny paper of the medical profession. It is full of wise sayings and fun and contains much interesting medical history and historical anecdotes.

To read it is a pic(k)nic and an antidote to hypochondria, melancholia and the insomnia of worry. Its editorial staff is a guarantee of its continuance. May it live long and prosper and like Judge Pullian's horse "have breath to the last."—*Western Med. Rev.*, Omaha, Neb.

THE PSYCHOANALYTIC REVIEW is not coming regularly and there exists no war excuse for its delinquency. Brothers White and Jelliffe are kindly asked to take notice and give us a psychoanalytic explanation of their delinquency in the premises.

This magazine is a good one and we should be pleased to see more of it.

EXTRADITION OF INSANE PERSONS.—By Henry R. Stedman, M. D., Boston, Mass. The author makes the following statement from a paper read before the Psychiatric Society of New York:

"It has taken the notorious Thaw case to awaken people to the necessity of interstate rendition laws providing for the return to proper custody in their own State of insane persons who have escaped into other communities, and if his escape from Mattewan should by any possibility accomplish this desirable end it will be the only redeeming feature of a case which has, as we all know, worked much harm to the repute of the medical and legal profession and has for years greatly offended the moral sense of the country."

IS THERE AN INCREASE Among the Dementing Psychoses, by Charles P. Bancroft, M. D., Concord, N. H. From the Amer. Jour. of Insanity.

The author is fully competent from ample clinical and other experience to discuss the subject and his contention is that the dementing psychoses are increasing. This paper is especially interesting to alienists and publicists.

THE PHYLACOGEN TREATMENT OF PNEUMONIA.—By Parke, Davis & Co., Detroit, Mich.

Some remarkable results are reported as having followed the use of pneumonia phylacogen in many serious cases that have been reported in recent months—cases in some instances that had failed to respond to conventional methods of treatment. Ample literature will be sent on request.

X-RAY STUDIES of the Ileo-cecal Region and the Appendix, by James T. Case, M. D., Battle Creek, Mich. From the Amer. Quart. of Roentology.

CONCERNING INDIVIDUAL DIFFERENCES IN REACTION TIMES.—By V. A. C. Henmon and F. Lyman Wells. From the Psychological Review.

THE SYSTEMATIC OBSERVATION OF PERSONALITY, in its Relation to the Hygiene of Mind; Concerning Individual Differences in Reaction Times; Experimental Psychopathology; all by Fred'k. Lyman Wells and from the Psychological Bulletin, are received.

These studies of Wells and his colleague, V. A. C. Henmon, are researching analyses of peculiarities and commonalities of character and worth of the psychologist's and psychopathologist's study.

FUROR CAESAREUS.—This is an interesting portrayal and brief character description by Dr. Archilles Rose, the Greek philologist and critic of the American Medical profession, of William the "war mad" Emperor of Germany, as he, Dr. Rose, plausibly contends concerning the present "War Lord" of the Germans. Dr. Rose compares his German Majesty in the present war with Napoleon, considering them "two of a kind" in world dominion ambition, "Deutschland uber Alles."

L'APHASIE DANS SES RAPPORTS AVEC LA DEMENCE ET LES VESANIES, (Etude historique clinique et diagnostique considerations medico-legales.) (Avec cinq planches et quarte figures dans le texte.)—Par Dr. Maurice Brissot, G. Steinheil, edit., Paris.

This splendid study of the subject dedicated to Dejerine and Brioud will instruct and entertain the neurologic reader equal to the best in any language extant.

ARCHIVOS BRAZILEIROS PSYCHIATRIA, NEUROLOGIA E MEDICINA LEGAL. Edited at the Hospicio Nacional de Alienados is a Brazillian magazine of merit devoted, as its name implies, to the advancement of psychiatry, neurology and medico-legal medicine.

We cordially welcome this magazine to our exchange list. Professor A. Austregesilo and Professors Moreira and Juliano are its scientific directors with an elaborate corps of editorial associates.

THE INTIMATE RELATION OF ORTHOPEDIC SURGERY TO NEUROLOGY.—By H. W. Wright, M.D., Santa Barbara. Reprint from the California State Journal of Medicine, September, 1914.

The contention of this valuable paper is that "as time goes on and neurological diagnosis becomes more exact the communal interest of the two branches of medicine becomes more important."

AN EPITOME OF THE DIAGNOSIS AND TREATMENT OF NERVOUS DISEASES, including Bromide Therapy. By Henry Irving Berger, M.D. This brochure, published by and in the interest of the Peacock Chemical Co., St. Louis, Mo. is a convenient little pocket remembrance of certain nervous diseases, in which the combined five bromides, three grains each to the drachm solution, are indicated according to Dr. Berger.

THE EFFECTS OF GOITRE OPERATIONS UPON MENTALITY.—By William Seaman Bainbridge, Sc. D., M. D., New York City. Reprint from American Medicine. The author claims good results where psychopathy co-exists. He has planted thyroid grafts in little cretins with usually distinct but only temporary improvement. Alienists should read this paper.

THE ART OF COMPANIONSHIP IN MENTAL NURSING, by Henry R. Stedman, Brookline, Mass., from the Boston Med. and Surg. Jour. contains good practical suggestions for the welfare of mental cases, especially of the milder forms, the so-called semi-insane, semi-fous and melancholias, hyperchondrias, etc., where night companionship is essential.

VAGABONDAGE AND BEGGING.—By Dr. F. DeFinkey, Professor of law, Sarospatak, Hungary. This paper comes with the compliments of the American Prison Association and contains suggestions for the cure of this growing social evil in our country.

CLAIMS ARISING FROM RESULTS OF PERSONAL INJURIES.—The relation injury bears to disease and disease to injury. Showing how personal injuries may affect various diseases and how certain diseases may add to claims for accidents by protracting recovery. By W. Edward Magruder, M. D., Medical Director National Investigation Bureau, Inc. Formerly Associate Professor of Clinical Medicine, College of Physicians and Surgeons; Mercy Hospital and Bay View Asylum, Baltimore, Md.

THE CASE OF BELGIUM in the light of official reports found in the secret archives of the Belgian government after the occupation of Brussels. With facsimiles of the documents.

This is the German side and from this showing it looks bad for Belgium's sincerity as to honest neutrality.

LE TRAITEMENT DES STENOSES AIGUES DU LARYNX.—Par Le Dr. Guil. Zorraquin chef de clin de chirurgien à l'hosp. de niños de Buenos Aires, Paris, Vigot Freres, Editeurs.

MEDICO-PSYCHOLOGICAL ASSN. OF GREAT BRITAIN AND IRELAND. Report of the Committee re status of British psychiatry and medical officers with append. of memo. notes and resolutions, 1914.

Interesting and valuable extracts to the psychiatrist from this report will appear later in this magazine.

THE CONTINUOUS WARM-WATER BATH the Rational Remedy in Tuberculosis (Phymatiasis) and in Infectious Diseases Generally.—By A. Rose, M.D., New York. From *International Clinics*, Vol. II, 23rd Series.

NOTES SUR QUELQUES MALADIES NERVEUSES ET MENTELLES AU BRÉSIL.—Par le Prof. Docteur Juliano Moreira, Rio de Janeiro.

NEUROSIS AND PURPOSE.—By George Mitchell Parker, M.D., New York. From *Medical Record*, 11-14-14.

THE EXTRADITION OF INSANE PERSONS.—By H. R. Stedman, Boston. From the Medical Record.

A very valuable contribution to the peril of lunatics at large of the non-maniacally impressive type requiring the attention of the guardians of the public safety and popular welfare.

ACTES DU CONGRES PENITENTIAIRE INTERNATIONAL DE WASHINGTON, Octobre, 1910.—Rapports sur Les Questions du Programme de la Section des Moyens Preventifs, Volume V. Groningen, Bureau de la Commission Penitentiaire Internationale.

REVUE DES SCIENCES PSYCHOLOGIQUES, PSYCHOLOGIE, PSYCHIATRIE, PSYCH. SOCIALE, METHODOLOGIE.—Pub. par J. Tastevin et P. L. Couchoud.

We hope the war will not keep this valuable magazine from coming to us. It is an excellent review.

THE PSYCHOSIS OF ADOLESCENCE.—By J. Montgomery Mosher, M.D., attending specialist in mental diseases, Albany Hospital. From Albany Medical Annals.

A paper of clinical observation and illustration as to this form of psychic degeneracy.

PRESENT STATUS OF SURGERY OF SYSTEMIC GOITRE, ILLUSTRATIVE CASES.—Wm. Seaman Bainbridge, A.M., M.D., From Jour. Mich. State Med. Soc. Also by the same author: Question of Anaesthesia in Goitre Operations from Annals of Surgery.

THE HECHT-WEINBERG REACTION as a Control over the Wasserman Reaction. A study based upon one thousand parallel tests with both methods. By R. B. H. Gradwohl, M.D., St. Louis.

LES DYSTHENIES PERIODIQUES (Psychose Periodique ou Maniaque-Depressive.)—Par R. Benon hospice. St. Jacques, Nantes.

A CRITICISM OF PSYCHOANALYSIS.—By J. Victor Haberman, A.B. M.D., Berlin. Instructor in Psychopathology and Therapy, Col. of P. & S., Columbia Univ., New York. From the *Jour. of Abnor. Psychol.*, Boston.

THE SEI-I-KWAI MEDICAL JOURNAL, edited and published by the Sei-I-Kwai in Tokio, Japan, comes to us regularly and is much appreciated for its English contents.

AN EXCELLENT CONTRIBUTION in *Revue de Medicine*, No. 9, is a clinical study on Demence Epileptique par R. Benon et A. Legal, Librairie Felix Alcan, Paris.

INSTRUCTIONS IN THE PROPER METHODS OF SECURING and Preparing Tissues, Body Fluids, Blood, etc., for Laboratory Examination.—By Dr. C. L. Klenk, St. Louis.

ON THE FORMULATION IN PSYCHOANALYSIS.—Fredk. Lyman Wells, McLean Hospital, Waverly. From *Jour. Abnormal Psychol.*, Boston.

LABORATORY AIDS to the Diagnosis of Diseases of the Nervous System.—By David S. Booth, M.D., St. Louis. From *Medical Fortnightly*.

THE WAY TO VACCINATE.—By Isadore Dyer, Ph.B., M. D., Tulane Univ., New Orleans, La.

THE ART OF COMPANIONSHIP IN MENTAL NURSING.—By Henry R. Stedman, Brookline, Mass.

THE ACID TEST IN THERAPEUTICS.—By John Aulde, M.D., Phil. From *Med. Rec.*

THE CHEMISTRY OF NEURASTHENIA.—John Aulde, M.D. From *Med. Times*, Phil.

VIRGINIA STATE EPILEPTIC COLONY, Madison Hgts., Va., 1914.

The reason for

Constipation of Infants

may often be readily traced to imperfect digestion of protein or fat, to a deficiency of total solids in the diet, to a lack of energy, or to a diet containing starchy substances. While this condition is not necessarily a serious one, a natural elimination with soft, smooth stools of a good character is much to be desired, and has no little bearing on the general health of the infant.

The prompt and favorable results following the use of Mellin's Food in constipation is common knowledge to a vast number of medical men, but to physicians who are not familiar with the application of Mellin's Food to correct these errors of diet, we will send, if desired, suggestions which will be found very helpful.

Mellin's Food Company, Boston, Mass.

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No. 2.

RIGIDITY OF THE CURRICULUM AN OBSTACLE TO THE PROGRESS OF MEDICAL EDUCATION.

BY CHARLES MCINTIRE, A.M., M.D.,
Easton, Penna.¹

AT the meeting of the American Academy of Medicine for 1893, I presented a paper entitled: "Medical Education in the United States; from Chaos towards Cosmos." At that time the wildest dream of the most imaginative would never have dared to assert that in a score of years the requirements for licensure to practice in more than one state would be more rigorous, academically, than the then formulated standard for admission to this Academy. We all rejoice in the fact that when once the professional conscience was awakened, it put on seven-league boots in its flight from the land of Chaos. It is not surprising, if one reviews this rapid progress, to find imperfections and that which had been planned for conservation becoming a stumbling-block rather than a stepping stone. Indeed, the journey has been deflected; it is no longer toward Cosmos but directed to crystallization. Cosmos is the orderly array of the forces of nature wherein unlimited flexibility is permitted to the individual while preserving perfect harmony and precise identity to the whole. What is formal, precise and restrictive tends to mathematic forms—to crystals, whose only variations are those of magnitude or of imperfections.

¹ Read at the 39th annual meeting of the American Academy of Medicine, Atlantic City, N. J., June 19, 1914.

The present thesis is: "The rigid curriculum, whether that demanded by state medical practice act, or formulated by the Council on Education of the American Medical Association, or by the Association of American Medical Colleges, or any other organization, is an obstacle to the progress of medical education."

Before attempting to defend this statement, I wish to say that the suggestion for preparing this paper came from two papers presented at the February Conferences for the present year. One by President Lowell, of Harvard, read before the Conference of the Council on Medical Education, entitled: "The Danger to the Maintenance of High Standards from Excessive Formalism."¹ The other by the present President of the Academy, which was presented to the Confederation of State Medical Boards and was entitled: "Should not the Federation of State Medical Boards of the United States Adopt a Uniform Minimum Curriculum for Medical Schools?"²

If unconscious cerebration causes me to make use of the arguments from either of these papers, I hope that this statement will be accepted as fitting acknowledgment.

I. THE FACT OF A RIGID CURRICULUM.

Little time need be taken to demonstrate the existence of a rigid curriculum. Possibly most present would accept it with the stating. Thus, the medical practice act of North Dakota requires:

"All applicants * * * must * * * present evidence * * * of having graduated from a reputable medical college and having attended in such college or colleges the lectures of no less than four college years of at least eight months each, and must give evidence * * * of a preliminary education which would be necessary to admit said student to the junior or third year of the University of North Dakota or some equally reputable American college or university."

1 Journal American Medical Association, March 14, 1914, p. 823.

2 Quarterly of the Federation of State Medical Boards, Vol. I, p. 199.

The constitution of the Association of American Medical Colleges provides:³

"The entire course of four years shall consist of at least 4000 hours for each student and shall be grouped in divisions and subdivisions into subjects; each division and subject to be allotted the number of hours as shown in the following schedule:"

The schedule that follows is particular and fixed. I quote the first division as an illustration:

DIVISION I, ANATOMY 720 HOURS (18 PER CENT.)

	Total hours.	Lecture, recitation or demonstration.	Labora- tory work.
(a) Gross anatomy (including applied anatomy)	510	120	390
(b) Histologic and microscopic anatomy	135	30	105
(c) Embryology	75	30	45

It should be noted that an appearance of flexibility is given by the following provisions:

"Colleges may reduce the number of hours in any subject not more than 20 per cent., provided that the total number of hours in a division is not reduced. Where the teaching conditions in a college are best subserved, the subject may be, for teaching purposes, transferred from one division to another. When didactic and laboratory hours are specified in any subject laboratory hours may be substituted for didactic hours."

While the requirements for admission are no less fixed as reference to the Transactions for 1913 (page 67) will show. I quote only a portion. There is required for admission (upon the high school requirement):

"A diploma and transcript of record from a fully accredited high school, normal school or academy requiring for admission evidence of a standard course in primary and intermediate grades, and for graduation, the completion of a standard four-year high school course, embracing two years (2 units) of mathematics, two years (2 units) of English, two years (two units) of one foreign language, one year (1 unit) of American history and civics, and seven years (7 units) of further credit in language,

³ Transactions, 1911, p. 86.

literature, history or science, making the total of units at least fourteen; and in addition, one year each of physics, chemistry and biology of college grade of each not less than six semester hours."

Other regulations could be cited but these suffice to show the existence of a rigid curriculum.

II. WHAT ARE SOME OF THE CAUSES LEADING TO THE ADOPTION OF SO PARTICULARIZED A STATEMENT FOR THE COURSE OF STUDY?

One very obvious cause is the contact with the public school authorities and adopting their methods; another was the laudable effort to make men honorable by law, and I opine that the causes are but one. Soon after the awakening of the public conscience to the low standard or lack of standard in medical education there was an immediate response on the part of medical schools by publishing in the catalogs requirements meeting every demand. With many the only change made was that made by the type; with most the catalog statements were profetic rather than descriptive of actual conditions. To correct this abuse of the imagination, rigid, undeviating requirements were formulated, which have been successful to a degree but at a tremendous cost. It becomes necessary for the medical schools to acquaint themselves with the requirements of each state and train their students to meet state requirements as the prime motive for their instruction. That the effort has not entirely removed the condition it was undertaken to remove is shown by a recent article in the Journal of the American Medical Association regarding a medical school in the middle West. I am of the opinion that other schools are as lenient in the interpretation of the requirements as may be possible without actually transgressing the letter of the law. Like all legislation of this character, the burden is heaviest on the law abiding, while those who made the legislation desirable find loop-holes. And the rareness of the holes only makes the law more rigorous for the innocent.

III. HOW DOES THIS RIGIDITY HAMPER MEDICAL EDUCATION?

I. It violates the natural law of growth. In all the higher types of life at least, there is a conformity to type but not a uniformity of individuals. Man is no exception to this and mental equipment varies. This condition affects:

(a) The Faculty, so that the trend of one school, if unhampered, would be toward research, of another, toward sanitation and the public services; a third would be composed of those whose desire is accomplished in fitting men as all around family medical advisers. Such specializing on the part of medical schools would make medical research more extensive and advance medical education.

It affects:

(b) The Student. By reason of mental attitude, or of peculiar conditions, all students do not require the same amount of time for any designated study. Thus a lad may have been living in a family where German was spoken and had acquired a fluent use of the language. As now formulated this would not be accepted as an entrance requirement, while another having a smattering of the language from his two units of study, is accepted. Pardon the personal illustration. Although my degree was obtained in the old days of Chaos, it gives the proposition in a concrete form. It so happened that before entering the University I had much more chemistry than would have been required even at the present. This would avail not a bit, the hours must be given to it when they could be used to better purpose elsewhere. So, in the development of the medical student, a rigid curriculum is an obstacle.

In order to prevent a misunderstanding of my contention, permit me to say that I am not pleading for less rigorous requirements, nor for courses fitting the student only to attempt to practice a part of medicine, but for more freedom to the professor and the pupil that the product may be a growth and not a form cast in a rigid mold.

2. This rigidity of curriculum magnifies the scaffolding to the detriment of the structure; it thinks more of the process than of the product. While this paper was evolving, I had a conversation with the president of one of our more prominent smaller colleges concerning his daughter. This young lady has the laudable ambition of becoming a medical missionary. The father was telling me of the difficulty of electing her college course to meet the requirements of her university (medical) course. Both are so rigid that an excess of the subjects required must be taken to the exclusion of certain studies necessary to the education of the young lady. To quote President X., "A——. would get her degree but not an education."

While it may not be a direct obstacle to medical education this undue stress upon the curriculum may work hardship to many a worthy individual since it requires the way to acquire, and disregards the actual acquirement itself.

3. This rigidity of curriculum prevents the readjustments made desirable by the progress of medical science, or the broadening of medical practice. Thus, demands are constantly making for the introduction of new subjects for the student of medicine and the importance of some of the former subjects has diminished. Psychology and materia medica are examples of each class. These demands would be met with comparative ease were it not for the rigidity of the curriculum which again becomes an obstacle to progress.

This rigid curriculum was devised to penalize the dishonorable medical school and the results have been meager. The advancement made, the progress in medical education and the elevation of the standard have been accomplished by the efforts of the honorable backed by public opinion, and would have come apart from rigid requirements. The suspension of so many of the weaker schools has resulted more from the changed conditions than the legal requirements. If it had a purpose that purpose has been accomplished; it is no longer needed. Since the Carnegie Foundation blazed the way and made

public the conditions well known but spoken of with bated breath, publicity can be depended upon to make or mar a medical school. Let an independent body, e. g., the Association of American Universities, draft a scheme providing (I) the knowledge to be acquired before entering upon the study of medicine, and (II) the fundamental knowledge necessary to seek to practice medicine. Upon these minima let each medical school build its course. As a prevention of fraud, let the Council of Medical Education of the American Medical Association continue its periodic investigation, publishing its findings fearlessly, and the shackle to medical progress will be broken, without abating the present educational qualifications, but rather improving them.

DISCUSSION.

Dr. N. P. Colwell, Secretary of the Council on Medical Education, American Medical Association:

"The most encouraging point regarding Dr. McIntire's paper, and the paper of President Lowell, to which reference was made, is the very fact that they have been written. If the standardization of medical education has reached the stage where it becomes necessary to call a halt or to urge more flexibility of standards, then indeed we have abundant cause for congratulation. Only a few brief years ago the chief burden of all papers on medical education was for better laws, higher standards and better enforcement of those standards.

"Since in this country we are now in the active stage where standards are being formulated, the plea of President Lowell and of Dr. McIntire for flexibility of standards is very important and timely. With the stand taken by these papers, furthermore, I am sure that those having to do with the formulation of standards are in entire sympathy. With the implication that the standards thus far set forth by the Council on Medical Education have been so inflexible as to work a hardship on high grade medical schools or on any well qualified or deserving student, I personally do not agree. From knowledge,

I can state that from the beginning the members of the Council on Medical Education have been avowedly opposed to rigid or inflexible standards. The setting forth of minutely detailed standards has been purposely avoided, or if such details were given, a specific statement was made that the standard was suggestive and not intended as a fixed requirement. Perhaps the most detailed standard formulated by the Council was the report of the Committee of One Hundred on Medical Curriculum, and lest some one might take it as a rigid law a special resolution was adopted that it be suggestive only. Furthermore, during the last several years, the influence of the Council has been repeatedly, and often effectively, exerted to prevent the adoption of excessive or over-rigid standards by a number of state licensing boards. Instead of becoming more unreasonable or over-rigid, therefore, the requirements by state licensing boards, even with the advances made in preliminary standards, are more uniformly fair than they were eight or ten years ago.

"Although flexibility of educational standards under certain conditions is very desirable, it must be stated that for some medical schools which have existed or still exist, the enforcement of definite and fixed standards has been absolutely essential. The plea for flexible standards is all very well for high grade, ethical institutions, such as those with which President Lowell and Dr. McIntire are doubtless best acquainted. I cannot believe, however, these gentlemen can have any real conception of the gross commercialism which heretofore has existed in medical education, or of the looseness, the make shifts, the evasion of all reasonable standards and even the out-and-out fraudulent methods employed by some so-called medical colleges in their efforts to attract and enroll large numbers of students. I am sure that if they had a full knowledge of the crookedness repeatedly unearthed in the investigations of the Council on Medical Education, they would agree that a statement that "rigid and inflexible measures should be enforced" would be altogether too mild an expression.

"Until such time, therefore, when all medical schools have developed an educational conscience and are being conducted along conscientious lines,—until that time will it be necessary to have a certain definite and fixed standard. This standard should represent an absolute minimum. Nowhere else is a fixed standard justifiable, and in only one place has the Council on Medical Education adopted or advocated a fixed standard; i. e., in its minimum standard on preliminary education. That standard is a four-year course in some accredited high school, or its actual educational equivalent, and in addition at least one year of work including college courses in physics, chemistry and biology. A reading knowledge of German or French is strongly urged. For the sciences named, after a very careful investigation, including conferences with recognized educational experts, a schedule of minimum hours to be required in each, was adopted. Few of the better colleges are affected by such "inflexibility" as may be found in that standard, however, since their requirements are far above that minimum. The medical college which in its requirements gets away from and above the minimum boundary line does not have to walk in as "straight and narrow" a path as the one which hugs closely to that line.

"In this discussion it must be remembered that this side of the millenium, standards in education are as essential as laws regulating human conduct. As Dr. McIntire has intimated, laws and rules are the result of and intended to correct certain abuses, or certain infringements on the rights of others. They are directed, therefore, toward those who would prefer to do what those laws forbid and not toward those who are doing the right from conscientious motives. It is no more possible, let alone desirable, for two medical colleges to be exactly alike in all minute details than it is for two persons to be exactly alike in all minute respects and characteristics. As all persons have in general a similar bodily structure, however, so all medical schools by common consent must be generally similar, if they are to

furnish their students with an all-round medical training. Laws or rules, therefore, should relate to the matters common to all persons, or all medical colleges, leaving as wide a latitude as possible to the individual for the detailed matters which are not common. Perhaps no rule or law was ever written by human hands which was so perfect that the intent or spirit of it could be fulfilled by a literal interpretation. Not only should laws and standards provide for the widest possible liberty for the individual, but it is even more desirable that the laws or standards be *administered* in a common sense manner with the spirit in view so far as possible rather than the latter.

"Standards and laws in education should be as guide posts pointing the way through the amazing wilderness of knowledge even as sign posts are placed to direct the traveler through a forest. As certain courses in education are pursued by large numbers of students those courses become more marked and more generally recognized as standards even as paths or roadways through a forest become more distinct as larger numbers of people travel along them. Standards, like roadways, therefore, are intended to meet the needs of the larger numbers of people. Occasionally the individual is affected by standards if he wanders too far away from the beaten paths of education. In such instances, however, it is not fair to blame the standards, any more than it would be to blame a roadway, or path through the forest, because some individual wanders too far away from it and gets lost. It is up to those administering standards to bring the individual affected back to the desired educational roadway and no one can be blamed for the accidental circumstances by which his time may have been lost.

"It is hard to believe that there is much danger in this country from seriously fixed or inflexible standards in education, chiefly because the formulation of those standards rests so much on voluntary natural organizations rather than in the national government. In individual states where the legal power rests, occasionally,

perhaps, unfair, excessive or rigid standards may be adopted but they are bound to be corrected sooner or later by the standards adopted in the majority of other states and by the power of publicity and public opinion. If one looks to individual occasions in politics he is perhaps inclined to tremble for the future of the democratic form of government. A prolonged view of the entire field, however, proves more than ever that this is a strong national government and that here individual liberty is best observed. What is true in general political conditions is also true in education. In some instances educational conditions are deplorable. Again in the efforts to correct these conditions, a few persons may be affected. Take the country as a whole, however, and one is impressed with the rapid and marked advancement both in the standards adopted and in the fairness with which these standards are administered. Nevertheless, as already stated, such papers as this by Dr. McIntire, are timely and important as warnings to those having to do with the formulation of standards."

Dr. H. D. Arnold, Boston:

"Dr. Colwell has expressed his appreciation of the timeliness of Dr. McIntire's paper, from the point of view of the standards of the Council on Education of the American Medical Association. As a representative of the Committee which drew up the curriculum adopted by the Association of American Medical Colleges, also cited by Dr. McIntire, I wish to speak in the same spirit of the timeliness of this paper. It is a good thing to have criticisms of this sort from those who are not obliged to deal with either the students or the schools that are trying to establish standards. They look at the matter from a little different angle.

"Both the Council and this Committee on Curriculum had in mind the disadvantage of rigidity to which Dr. McIntire has alluded, yet at the time there was such wide variation in the course of study in various schools that it was unnecessary to emphasize the need of greater

uniformity. It was necessary to make the curriculum rather more rigid than the ideal which the Committee had in mind. These things look a good deal more rigid on paper than they do in the minds of the people establishing them.

"There are one or two points that I would like to emphasize on the other side, as a result of the investigation which our Committee carried on between four and five years ago. I hope that the medical schools have come much nearer to uniformity than was the case at that time, but I doubt if they have attained such uniformity that it is not still of value to have pretty definite standards set up.

"Our Committee asked for statistics from the 80 best medical schools as to the number of hours given to different subjects. We received replies from something over sixty. Two of the best medical schools were left out of our calculations because they had so many hours assigned for exercises that they could not fairly be taken into account in determining the standard of education prevailing in the better medical schools. An excessive number of hours in the curriculum is one of the evils to be guarded against.

"The other point is the need of balance in the curriculum. Those of you who are connected with medical schools know very well that our instruction in different departments has grown up helter skelter; that the instructor with much interest in his subject, if he has influence with the faculty, has gotten hours assigned to his subject irrespective of what that subject deserves in a well rounded medical education. Irregularities of this sort are largely eliminated by gathering statistics from a large number of schools. The average of our statistics gave a composite picture of about sixty of the best medical schools, and represented the consensus of opinion of the medical educators of the country. The Committee also discussed the question and tried to get the right proportion for the different subjects. We tried also to

get a certain amount of flexibility by allowing a difference of 20 per cent., one-fifth of the time, in any one subject.

"I hope the condition has come about that a rigid curriculum for the better medical schools is no longer necessary; but I would emphasize also the other side: that there has been a very wide variation in the past and that there is danger that the medical student may get a one-sided education instead of a well-rounded education in the fundamentals of medicine."

Dr. Thomas D. Davis, Pittsburgh:

"This is an exceedingly important subject. The standard should not be a matter of hours or years, but should be what the student knows, not how long he has been studying, nor how long it takes him to acquire proficiency. The schools require a certain number of hours that the student must attend, rather than giving us a higher standard of what the student shall know. Just as Dr. McIntire stated, there are some minds that will acquire knowledge very much more rapidly than others. There are some students who have had preliminary preparation by which they can more readily acquire knowledge, yet that is not taken into account; they must go the full four years, even if they can complete the curriculum in three. Those of us familiar with the advance of medical education, for which this organization stands, will remember the long fight that we had getting State Boards. In Pennsylvania, not a medical college helped us. Afterward the colleges, seeing the pecuniary advantages to themselves in a four years' course, came in and seemed to force the State Medical Examining Boards to require a definite time of study, rather than a definite amount of knowledge. Hence, they now require four years in a medical college, double the old time, but as far as I can see, receive no more knowledge. It seems to me that if examining boards are of any real value they should tell us what the student knows and whether he is fit to practice medicine. The standard should be what he knows. That is the standard of other countries.

The men are examined to find out how well qualified they are and not to ascertain how many years they have spent in becoming qualified."

Dr. Edward Jackson, Denver:

"There are certain things that make for undue rigidity in standards. One of the most important is the giving hours, or units in representing hours, as a standard, instead of attainments. It is much easier to lay out a schedule of hours than to lay out a schedule of attainment in any particular branch. It is enormously easier to divide four years into semesters and periods, assigning them to one subject and to another, than to indicate the whole field that must be covered by medical education, and the attainment which should be recognized as proper in each subject. But our standards will not be satisfactory until we come to some general agreement, not upon years or hours but upon the question of what a medical student should know before he is allowed to practice medicine. The examinations to test attainments are as difficult to arrange as are the standards for the work. It may require just as many years to give us examinations that will do what we would like, and have a right to expect they will do. Such examinations will have to be something very different from what is yet current among State Medical Examining Boards, or the examinations conducted by faculties. We can not feel that we have established proper standards for medical education until we have our examinations worked out, as well as the hours in the medical curriculum.

"Another matter which makes for undue rigidity is that a certain amount of intelligence must be worked in with the law. A good many of the States have attempted to put too much into their laws. They have done, what committees have also done, tried to put too much into their schedules. It must be recognized that no law will work itself, and that no law will work well unless it has intelligence back of it. There must be intelligent administrators who know what they are aiming at,

recognize the proper claims of universities, and are ready to meet them.

"Those who do not come into immediate contact with the Council on Education of the American Medical Association, may not know that there has been in that Committee full recognition of the necessity of ruling on individual cases on their merits. I suppose from some schools questions brought up to the Council would be decided rather strictly according to the routine standards. But for schools in which the Council feels confidence in the administration of their schedule, the rulings have been on the side of liberality in individual cases, as I think they should be. If a faculty that can be assumed to be earnest and honest in its endeavor to have proper standards is convinced of a student's qualifications, and the circumstances make it somewhat difficult to prove just where he belongs in the course; or, if the faculty recognizes that in spite of some apparent deficiency, he is fully able to take up a certain year's work in medicine, so far as I know, the ruling of the Council has been on the side of the student, rather than to enforce the hours laid down.

All these things must be taken into account. The State laws must be so framed that the administration under them will be given sufficient opportunity to change or vary requirements. The State examiners must recognize that colleges must be allowed to grow into the best scheme, rather than have it forced upon them. This is particularly true in the matter of hour requirements in which two states have, within the last two years, laid down as a minimum requirements seemingly unreasonably great. Finally, it must be recognized that all along the line there must be intelligent administration of these laws and regulations. With this recognition, I think our standards have not gone very far in the direction of too great rigidity."

Dr. John VanDuyn, Syracuse:

"I hardly think I should speak upon this subject after such eloquence as we have here. I venture to say,

however, that I do not quite understand what is meant by "standards" and "knowledge" in the present discussion. Surely, if knowledge is ability to pass an examination, if it stands for what one knows by the authority of the books, then medical education has made no advance since the '60's. Many of us went before the examinations of those times and could recite almost all of Gray's anatomy and know our "physiology" by heart. In those days, much as now, education consisted in the training of the memory, and the passing up of fees. Today we are fast coming to what we may call a physiological education. In older days education was a matter of storing facts. Then, too, our subjects are so much more increased in number. In former times if we knew Dalton and Gray, and a few things besides, we could pass any examination, but, today, we have gone into such a variety of things some knowledge of which is necessary to constitute what is called a doctor. The fellow who comes up for examination and has a good appearance, assurance and good judgment, even though he may not know much anatomy, etc., may be one of the best physicians of his time. I would emphasize the fact that there can be but one standard, which is that of excellence. The knowledge of today will not be considered knowledge, perhaps, a few years hence in the future."

Dr. Ray Lyman Wilbur, San Francisco:

"It seems to me that a minimum fixed standard will not interfere with the development of any good medical school and will be of great value in the poor medical school. I think it is a much more satisfactory guide to know that a man has been four years in a good medical school than to know that he has passed a set examination as carried out in many parts of this country. Ability to pass an examination means very little. Personally, I would prefer to permit students who have diplomas from recognized institutions to practice without examination rather than see any elaboration of the examination system. In such institutions as Johns Hopkins where

other students are able to graduate and yet specialize quite a little we find that they have no trouble with State Examining Boards. Probably the standard is sufficiently high so that the State Boards do not quibble about number of hours and years."

Dr. James C. Wilson, Philadelphia:

"I rise with a good deal of diffidence to say a word upon this subject upon which I have some very decided opinions. I think it is essential that we recognize that standards must be required, and that so far as possible, standards of examination must be made imperative. The present condition is a compromise between the requirements of the standards and the requirements of the examinations, both relating to the graduate as a practitioner, teacher of whatever specialty he may select. I am quite sure that the value of the number of hours as a standard depends, not wholly upon the student, but also upon the teacher. Pedagogics is one of the fine arts, and the teacher must be able to recognize the fact that there are various degrees of capacity and be prepared to teach the individual student. The mere question of hours must not be allowed to take too high a place. On the other hand, the examiner cannot feel that he has discharged his duty without having general information as to the amount of time or the amount of instruction the students have had because of the great difference in the capacity of the applicants for license. This all goes back to the institution. The fault that I discover in the whole matter relates to the requirements for admission. When I say this I speak as one with experience as a teacher for forty years; first in junior capacity and general utility man in a large medical school and afterwards for twenty years in the faculty, and I am quite sure that I am right in saying that the institution must determine how a student shall be prepared to receive his degree and appear before an examining board. The aim of the institution must be to arrange some method of determining the fitness of a man to undertake the study

of medicine other than a mere number of units from high school, so that a man who has not the capacity, the preliminary education to become a physician, shall not be permitted to enter the classes. The institution must see to this quite independently of any fixed regulation. It should have a very competent body of men to go over the fitness of individual applicants. Some of the most shocking things have presented themselves to my mind as a teacher, for example: that a man should enter a medical school, pay his fees from year to year, and be turned down at the final examination for some grammatical or orthographical defect in his paper. I have known that to occur time and time again. It seems to me almost like a scholastic crime. To state it mildly, it is a crime on the part of an institution to allow a man with an utter incapacity to meet the requirements to go on year after year spending his money and his time and then be turned down. Teachers in medical schools should see to it that no man who lacks capacity should be graduated. More than this, they should see that no man lacking capacity should be admitted. Appointees should look to themselves. No man should accept a place upon a licensing board if not fully capable of properly examining applicants and altogether free from bias. It is a matter of conscience that members of an examining board shall so arrange their basis of examination that they shall know whether a man hesitates or makes trifling errors because he is anxious and nervous or because he is not qualified. The board should be able to determine whether a quick fellow of good memory shall be able to go through on inadequate knowledge and insufficient education. This subject is one of the most important matters under the consideration of the medical profession at the present time."

THE MENTAL STATUS OF ROLAND P.

DR. P. M. KERR,

Pennsylvania Training School for Feeble-Minded Children.

Elwyn, Pa.

WE are beginning to appreciate the vital importance of an early recognition of imbecility. Psychiatrists, psychologists and pedagogues are contributing volumes; the recently awakened interest in eugenics and sociology is manifested in numerous articles appearing in lay literature—even newspapers are plethoric in editorials pertaining to the imbecile.

All workers in social welfare concur in the advisability of an early and permanent sequestration of the imbecile. But it is of paramount importance that the entire lay world be made an advocate of the segregation of the unfit; the public must be taught to regard every imbecile as a social liability. And with public thought so crystallized it is certain that legislation for adequate funds for the care of imbeciles will meet with better success than has heretofore obtained; increased facilities for the care of irresponsibles will lessen the burden of our juvenile courts and field-workers; the tread of imbecile feet will make a "beaten path"—**not** from court room to jail, but from court room to asylum.

Experience of centuries has taught us to synonymize irresponsibility and imbecility; we know that the average imbecile is a potential criminal—protect him! He needs a harbor, not a dungeon.

So much for imbecility in the abstract. I shall now offer to the reader a concrete example of an irresponsible delinquent—a murderer at the age of nineteen, who at the time of this writing, awaits the imposition of the court's sentence—death.

The story of his crime follows:

On the night of November 7th, 1913, Louis P. was brutally murdered. The victim, a young man, was employed as general manager of a dairy farm. His two assailants were subordinates: one, whom we will designate George M., was employed as overseer, and the second, Roland P., was engaged as a helper or chore-boy. The overseer, a man of forty, is said to have conceived a hatred for Louis P. because of the latter's familiarities, fancied or actual, with George M.'s common-law wife. On several occasions he had remarked to Roland P., "Lew is to d—— familiar with my wife; if he don't cut it out, I'm going to get him." On the day of the crime he approached Roland P. and the following conversation ensued:

"Roland, wouldn't you like to have money?" To this agreeable proposition Roland P. graciously assented.

"Roland, what does a thousand dollar bill look like?"

"Why, it would be a one with three o's."

"Is that so? Lew has one like that. One day when I was out west I saw a farmer drive up to a bank. I noticed when he came out and asked him for a lift. He gave me a ride on behind and when he wasn't looking, I hit him with a black-jack and came east with \$70. It was dead easy. Why don't you get Lew and go west?"

R. P. "What do you mean, kill him?"

G. M. "Yes."

R. P. "No, I won't do that."

G. M. "I'll give you a black-jack, you hit him first and I'll finish the job." Roland said nothing to this.

Later in the day, George M. handed Roland a black-jack and told him to put it in his pocket; goaded him throughout the day and promised to "give him half."

That evening he stationed himself in a position where he could watch both Roland P. and Louis P. as they passed to and fro in front of the barn. When Louis P. entered the barn George M. whispered to Roland, "Now is your chance, nail him!"

Here follows an extract from Roland P's. confession to the District Attorney:

I went in and said, "Lew, there's a nail in the stall next to the box stall. Go in and look at it and see if there is any danger of it scratching the horse." Lew walked into the stall ahead of me, up towards the manger, to look for the nail, and I followed him in. While he was looking for the nail, I struck him with the black-jack in the back of the head. He turned around and said: "Hey! What are you doing?" I did not say anything. He grabbed for me and missed me. He made another grab for me and caught me around the neck and shoulders. I then took holds with him and we started to struggle. He held on to me and I hitting at the side of his head with the black-jack. We fought out of the stall in back of the horses. He backing out first with his back toward the stable door. We were tussling and he threw me down. I then got the best of him and turned him over and struck him in the face with my fist. He had got the black-jack away from me. When I turned him over, he was lying with his head—lying on his back with his head towards the door. As soon as I got the best of him he called two or three times for George. George was standing just outside the stable door with both doors shut. As soon as Lew started to call him, George came in. As soon as George came, he asked him, "What is the matter Lew? Did the horse kick you?" Lew says, "Yes, yes, help me."

Q. What did George say to that?

A. George didn't say anything. He leaned down and whispered to me, "Where is the black-jack?" I whispered back, "Lew's got it." Then George got hold of the black-jack and tried to get it away from Lew. I don't know whether he did get it away or not. He must have gotten it away, because he told me afterwards

that he had hit Lew in the head once or twice with it. He said Lew had a deadly grip on it. He then kicked at Lew's head and kicked me on the knuckles of my right hand.

Q. What then happened?

A. I then let go of Lew, and Lew kept struggling.

Q. Did you get up?

A. Yes. I got up from Lew, and while I was getting up George kept kicking him in the head.

Q. What did Lew say, if anything?

A. And Lew said, "George, you are no kind of a man. Help me."

Q. Did he yell that?

A. No. I don't think he said—just the same as if he would say it naturally.

Q. And what did George then do?

A. George then kept kicking him in the head.

Q. And what was Lew doing?

A. Lew was struggling with his arms to keep his kicks away from his head.

Q. And was he yelling, screaming?

A. No. I think he was halloing or moaning, sort of kind of.

Q. Did he get up at all?

A. No, he didn't get up.

Q. And what then happened? Did George say anything while he was kicking him?

A. No, he didn't say anything.

Q. Then what happened?

A. Then after he had kicked him several times—

Q. In the head?

A. In the head, he laid still, and then George went up to the house after a lantern.

Q. Where did you go.?

A. I went outside the stable door and waited until he come back; shut the stable door and waited until George come back with the lantern.

Q. When he came back with the lantern, what did he do? Did he come in the stable?

A. He went in the stable.

Q. Shut the door?

A. Shut the doors, and I followed him in, and he felt Lew's heart; put his hand on Lew's heart, and said he was still breathing; then he goes around to the side of him and kicks him with his heel; stamps him with his heel in the side.

Q. Over the heart?

A. Yes.

Q. Did Lew scream then?

A. Lew halloed. He didn't scream, I don't think, the whole time. Kind of "Woo!"

Q. He gave one loud hallo, did he, or several of them?

A. One loud hollo.

Q. Did George kick him in both sides or just one side?

A. Both sides. The first time he kicked him he was on the wrong side, he said.

Q. George said?

A. Yes.

Q. What did he say?

A. He said, "Where is his heart? Which side is his heart?" and then he thought and went around to the other side where his heart was, and kicked him on that side.

Needless to say, the victim was fearfully mutilated, the Coroner's physician testifying that death was due to rupture of the heart and lungs. The murderers carted the body several miles away from the scene of the crime and buried it near a woods. George frequently cautioned his accomplice: "Keep your mouth shut, don't say a word." Contrived to keep him away from the detectives as much as possible by sending him to husk corn in a distant field.

The men were accused of the crime and Roland P. confessed. George M. then led the searching party to the grave and later pleaded "not guilty." Averred that he had had no hand in the murder excepting that

he helped to bury the deceased; feared Roland would try to incriminate him if he refused to assist in the disposition of the body.

The writer was asked to examine Roland P. because the attorney could not understand the boy's attitude. The lawyer stated that his client was "unfeeling and without proper appreciation of the enormity of the crime." I interviewed the boy in his cell in the Media jail and must confess that I was shocked when a tall stalwart lad of only nineteen confronted me. He shook hands and appeared glad to welcome me; in lieu of a chair, courteously offered me a box, and pointed with evident pride at a Bible that he had been reading. To my queries concerning his history, he answered me relevantly and, I believe, truthfully. Here is a sample of our conversation:

"How old are you?"

"About nineteen, I guess."

"Why did you leave school?"

"Wanted to work."

"Did you work?"

"Yes sir, around the house."

"Why did you leave home?"

"Had a fight with my mother."

"How old were you when you left school?"

"I don't know exactly, about fifteen, I guess."

"After you left home, how long were you away?"

(After some deliberation) "About three years."

(His sojourn from home was really eighteen months.)

"Did you like George M.?"

"Yes, he was good to me."

"Did you like Lew? Would you have cared to chum with him?"

"Yes, Lew was a good fellow. Me and him never had any trouble."

"Then, why in the name of all that is natural, did you kill him?"

(Without emotion) "I don't know, I guess because George told me to."

"Roland, you studied United States History; what were the causes of the Civil War?"

"To free the slaves."

"Who was the commander in chief of the Revolutionary War?"

"I don't know that one."

"Was it Washington?"

"Oh, yes."

My diagnosis of high-grade imbecility is based on a physical and psychological examination and a careful consideration of the excellent data obtained from the records of the Quaker school that he had attended.

Age 19 years; weight 165 pounds; height 5 feet, 9 inches; well proportioned and muscular; asymmetries few and insignificant; a brunette, hair auburn and wavy; pilosity poor, excepting head and pubes. Deep orbits; receding forehead, 70 degrees; facial and aural angles, 68 and 20 degrees respectively. Ears somewhat asymmetrical, right ear having well opened helix.

Cephalic index being 81 per cent, the head is therefore brachycephalic. There is a moderate degree of enlargement of the left lobe of the thyroid; the right lobe is markedly enlarged. Tachycardia, pulse being 110, of good volume, tension and rhythm. No valve lesions in heart. Patient tells me that he sweats easily; palms of hands are bathed in moisture. Deep and superficial reflexes normal, excepting the cremasteric, it being entirely absent. Slight dermatographism.

A psychological examination reveals the following: Powers of attention—excellent. Powers of expression—has good vocabulary and answers questions promptly and relevantly. Quickly grasps the general meaning of a statement or question, if it be not too involved, but often fails to appreciate its full significance. Prone to miss the motive of the questioner.

Memory: poor, especially for long lapses of time. Example, states that he left the Westtown School at 14 years of age, remained with his mother a short period and then went to Philadelphia where he remained for

three or four years. As a matter of fact his sojourn in Philadelphia was only a year and a half. This tendency towards temporal confusion is a common feature of imbecility. Again—concerning the crime—he recalls with difficulty the details which led up to the same. Has had more than a month for reflection, but has made little progress in this direction. A normally receptive mind would have had each detail indelibly impressed. Since he left his home, he has worked in numerous places, and, with one or two exceptions, he is unable to recall the names of his employers.

The prisoner made what was supposed to be a full confession of the crime, the District Attorney declaring in court that he had cross-examined Roland for six hours. Yet the prosecutor failed to elicit such important data as George M.'s appeal to Roland's cupidity: the fictitious western adventure and the episode of the thousand dollar bill. Roland told me that he had not mentioned George's remarks prior to my visit; states that he had nearly forgotten what George had said. It is quite conceivable that he had forgotten them. He failed utterly to discover sinister motives in these advances and always considered George a good friend. Therefore, in failing to detect anything overt in the friend's artifices, it is obvious that there could be no associative tendencies—the conversation was relegated to that twilight zone called 'subconscious memory.'

This obtuseness naturally implies a defective judgment; and the inability to perceive motives is as common to imbecility as is the incapacity to appreciate the subtler forms of expression, such as irony, sarcasm, satire, metaphor and simile. Expediency often fails to govern the actions of the Moron; judgmental defect and a moral code ranging perhaps from a slight obliquity to downright turpitude, combine to constitute the viscious class of criminals commonly called incorrigibles or recidivists. Roland is of this class. Memory may or may not be normal and from a medico-legal standpoint, this point is very important. Is it not true that we tend to give

memory a geocentric position in our investigations and in the event that this process of consciousness prove intact, are we not prone to underestimate the importance of other phases of consciousness? Where the general practitioner attempts to qualify as an expert, as happened in this trial, this tendency is almost inevitable. It certainly obtained in the case of which I write, and, I believe, militated greatly against the assumption of Roland's mental deficiency. As compared with the tests for other processes of consciousness, memory presents little difficulty to the unskilled examiner.

According to the tests formulated by Binet-Simon, Roland has a mentality of a normal boy of eleven. Here are some extracts from the Binet tests:

I have three brothers, Paul, Ernest and myself. Roland said, "That is all right."

If in a moment of despair I should commit suicide, I should not choose Friday, for Friday is an unlucky day and that would bring me bad luck.

"Don't know that one."

As to definitions: "Charity is giving to the poor." "Justice is doing good." "Goodness is being good."

Take this from the twelve year test: A person out walking in the woods suddenly stopped, much frightened, and ran to the nearest police station to report that he had seen hanging from the limb of a tree—what?

Roland answered, "a snake."

Most of eight, nine and ten year tests, he answered satisfactorily.

Right here, let me remark that in making my deductions as to Roland's mental status, the usefulness of these Binet-Simon tests was negligible; as a means for presenting convincing evidence to the jury, these tests offered little. The following remarks may explain the difficulty.

As applied to the twelve and thirteen year child, the Binet-Simon tests give a fair estimate of the amount and kind of previous training; also, they may serve to bring out certain forms of cleverness. But they fail to

indicate real intelligence. The tests as applied to norms under twelve years are of undoubted interest to the psychologists; when applied to the field of variational psychology, however, their value is questionable. To the initiated they are superfluous. We tell an imbecile of twenty that he 'tests ten years'—has the intelligence of a normal child of ten. Logically then, we may assume that the normal child of ten has the intelligence of a certain imbecile of twenty. How many doting parents will subscribe to this absurd proposition?

The chief advantage in describing a mental defective in terms of mental age is this; it is intelligible to a layman. The latter may or may not appreciate just what low, middle and high grade imbecility means, but he does know what is expected of a eleven year child. Thus, if you tell a parent that his nineteen year old boy has the mentality of a normal child of less than eleven, your observation will probably be understood. During the trial, therefore, we deemed it wise to declare to the jury: "Roland is a high-grade imbecile or moron and his mentality is that of a normal boy of eleven."

Roland could not retain a position if he were required to use even ordinary judgment. At one time he worked as a laborer during the erection of a moving picture theatre. He acquitted himself creditably. Because of his prepossessing appearance, the manager promoted him to the exalted office of ticket chopping and he was required to exercise his judgment in separating hoodlums and negroes from the possibly more genteel element; also, he was enjoined to give elderly patrons the choicest seats. He failed signally in this vocation and was discharged.

When alienists for the prosecution examined him in his cell he answered everything to the best of his ability; did not mention to his own attorney that he had been examined, although he had been cautioned to answer no questions unless his lawyer were present. The lawyer did not hear of the interview until several days had passed. And then when he reproved Roland, the latter said, "I forgot to tell you."

Several days prior to the discovery of the body of the murdered man, Roland suggested to a brother of the deceased that they go to Chester to play pool. This suggestion shows at once his lack of the ordinary precepts of decency as well as his judgmental defect. When asked what he would do if he were liberated from prison, he answered, "I would go home and try to help around the house the best I could." Would you expect such a puerile answer from a normal youth of nearly twenty?

Volition: Refused repeatedly to do George's bidding, yet he accepted a black-jack three hours before he committed the crime. Here is another extract from the confession:

Q. What did George M. say about Lew, or doing away with him? Do you recall?

A. No. Only that he said, "Lew's still got that pile of money on him. Let's get it."

Q. Did he say, "Let's get it," or, "You go get it?"

A. "Let's get it." After he first spoke about doing away with Lew he said, "You go get it and I will help you."

Q. What did you say then?

A. I refused.

Q. What did you say?

A. I said, "No, I won't do that."

Q. "I said, 'No, I won't do that.'" Did you give any reason?

A. First I asked him how he was going to help me. He said, "I will help you put him away."

Q. He said, "I will help you put him away?"

A. I said, "No, I won't kill him."

Q. "No. I won't kill him."

A. Then he said to me, "Well, you start it, and I will finish it," and he gave me the black-jack.

Q. He said, "You start it, and I will finish it?"

A. Yes.

Q. Did you hesitate at that?

A. I hesitated all that day, and then he kept coaxing me.

Q. What did he say?

A. He kept asking me all along, "Well, have you made up your mind? Don't forget that's an easy chance. Don't let it slip through your fingers." Or something like that. Kept dogging at me.

Q. Up until what time?

A. Well, all that day he kept coaxing me that way.

Q. When did you make up your mind—when did you tell him that you had made up your mind, or what did you say to him that indicated to him that you had made up your mind?

A. The only indication was when he handed me the black-jack and I took it.

Q. The only indication was when he handed you the black-jack and you took it. Hadn't you said anything before that, that would indicate it?

A. No.

Q. Had he said anything to you about giving you a black-jack to do it?

A. Yes.

Q. What had he said about that?

A. He said, "I will give you a black-jack. You can do it with that."

Q. Where did he give you the black-jack and when?

A. In the milk-house, about three o'clock.

Q. And what did he say when he gave you the black-jack?

A. "Here's the black-jack. Now, don't forget."

When George M. said "Now is your chance, nail him!" Roland immediately turned to Lew with "There's a nail in the stall; go see if there is danger of it scratching the horses." The association of the tempter's "Nail him!" with Roland's nail pretext is evident.

During the trial of George M. and while Roland P. was testifying against his former accomplice, George M.'s attorney addressed Roland thus: "Roland, had you no compunctions of conscience in killing Lew?" Roland,

who of course, hadn't the slightest understanding of the attorney's "compunctions of conscience" (a redundancy by the way) hesitated, then answered "No, sir." He was again asked if he had no compunctions of conscience, and, realizing that his answer had been received with disfavor, he replied in the affirmative, properly pleased with his own penetration!

At school he had never been a leader nor was he even popular with his companions and teachers. He is described by one instructor as colorless and vacillating. Temperamentally he is phlegmatic. Has no affection for acquaintance or relative and really is too indifferent to bear malice. He will lie when the truth would serve. While in the employ of a physician, he disclaimed all knowledge of cards—"didn't approve of them anyway." A pack was subsequently found in his room. Said he had no interest in the opposite sex and that very evening he tried to negotiate an engagement with a serving-girl. Once while with a crowd of hoodlums, he spoke disrespectfully of his mother. A companion suggested that he should like to call on Mrs. P. Roland said, "It will be all right, go ahead." When rebuked for this crassness, he evinced no shame whatever. Naturally a coward, he shuns a quarrel. Says he is sorry he committed a crime and manifests a moderate amount of self pity because of his present predicament. Professes no remorse for having killed a man for whom he admits he had no dislike. He feels misused because he has not recovered a small amount of back wages which he claims the dairy-man owes him. When he accompanied the detectives to the grave at the time of the discovery of the body, he fell asleep in the wagon. He complains of the confinement of cell life and expresses his desire for more exercise—a larger penitentiary. Does not appear doubtful as to the leniency of his sentence. During the trial he slouched in a chair, hardly moved a muscle and showed no emotion when his parents were on the witness stand, although the spectacle was most pathetic and might well

have moved a Caligula or a Nero. Even the presiding judge remarked about this unstudied stoicism.

Since the trial and conviction of his accomplice George M., Roland has felt quite elated. Far from feeling Judaic, he poses as a hero. Evidently assumes that the whole blame is now resting where it belongs, serenely ignoring his own part in the crime.

He is an inordinate cigarette smoker.

The family history is interesting. It is alleged that the mother is of questionable character; the father is a weakling. There is a younger sister who is said to be backward in school work. There are also three cousins; one is an idiot, one an imbecile; the third is a high-grade imbecile and paraplegic. Several maternal aunts and uncles are insane. The father told me that he left his wife about eight years ago and in extenuation, quotes his wife's father as saying, "John, you can't stand all this abuse from Lettie; why don't you get out?" States that shortly before his boy's birth, there was a noticeable change in his wife's temper; she became morose, fault-finding and extremely domineering. This history is significant.

I was on the witness stand for an hour and a half. The fact that the counsel for the defense had ordered an examination of his client without first notifying the district attorney, was considered by that official as sufficient reason for striking my testimony from the Court's records. The point was not sustained by the Judge, however. And then begins the usual "bully ragging." One would think that I am the culprit. The attorney sneers at the Binet tests (his questions clearly show his entire ignorance of their very existence) and attempts to discredit my testimony as to Roland's neurotic family history by presenting twelve laymen and four physicians, all of whom swear that a cousin, distinctly imbecilic, is of normal mind. George, the cousin in question, is a lad of eighteen, a high-grade imbecile and paraplegic and has a feeble-minded sister. He was committed to our

institution by an uncle who feared that the boy might involve the family in further distress.

The district attorney tries to prove that this boy was committed to our institution merely to create sympathy for his cousin Roland. Hence, to prove the normality of our charge, twelve laymen and four physicians are called. A whole afternoon is frivoleed away in an examination of all these witnesses for evidence that is purely collateral. One witness, a cobbler, states that 'George went to church regularly and sometimes spoke.' He is, therefore, convinced that George is normal. A former employer of the boy testifies that George worked for him as assistant plumber and always "minded him." *Ergo*, George is normal. What could the evidence of Dr. M. W. Barr and myself avail against such erudition?

The four medical mercenaries who offered testimony as to George's mental condition are general practitioners, and, with one exception, have had no experience in the field of psychopathology. All are physicians in good standing; they are familiar with our institution and fully cognizant of the humane character and purpose of our work. These pseudo-experts were retained by the District Attorney who requested that they examine and report George's condition—of his antecedents and history they knew nothing. They visited our institution, were closeted with the boy just forty-five minutes and were then fortified in their pre-formed opinion and quite willing to testify as to George's mental normality. Their testimony in court must have been a revelation to the jury. They would neither frankly concede the boy's defect nor admit of the boy's normality. They hemmed and hedged, juggled and dodged—like Gratiano, they spoke an infinite deal of nothing. These medicos willingly abetted their retainer, the District Attorney, whose intent was to create the impression that a normal boy could be incarcerated against his will—sacrificed to the interest of his cousin Roland. Of course the whole proposition is absurd. It proves three points: the unscrupulousness of some physicians, the assinty of some attorneys and

the patience of a certain Judge. It may be of interest to our detractors to learn that George (who was present in court and therefore heard the testimony) was much impressed by their efforts in his behalf and has since run away from our asylum. But let us return to Roland and the progress of his trial.

The fact of Roland's three year retardation in school is dismissed by the District Attorney as "showing only inattention." Two teachers testify to the contrary and furthermore declare that the boy at fourteen was in a class of eleven year children. For three years he had failed to graduate from that class. The Binet tests are pooh-poohed as absurd. Some of them are. I am asked why I consider Roland volitionally weak, unduly acquiescent—"when it required six hours to wring from him a full confession of his crime." The presiding judge warns the prosecutor that if he enters this statement, the whole confession will be disallowed as testimony, stricken from the court records, his Honor holding that six hours of grilling is equivalent to the "third degree." Thereupon, the adroit attorney quietly withdraws his query and offers it as a hypothetical question instead, thus: "If it took six hours," etc. "would you consider him of weak will?" This is allowed. I explain that ~~the~~ the confession (a lengthy statement of sixty-five typewritten sheets) was made voluntarily—and it undoubtedly was—the expression "wring from him a full confession" is clearly exaggerative and likely to misrepresent the boy's real attitude. I also add that if six hours were required to elicit a voluntary statement, the point in itself suggests a low grade of intelligence. Then the attorney addresses the following statement to the jury:

"George M. was convicted of the murder of Louis P. almost wholly on the testimony of an imbecile—if the testimony of the defense is to be believed. If Roland is free, George M.—"

At this point the attorney for the defense vigorously objects. He contends that the prosecutor is manifestly introducing unfair deductions. The Judge supports this

objection and orders the statement ruled out. But the jury had heard the District Attorney's contention and it probably left its impression.

Dr. Goddard of the Training School at Vineland, N. J. and Dr. J. Madison Taylor, who has been connected with our institution for feeble-minded for many years, were my co-workers in behalf of the defense. These gentlemen testified that Roland is an imbecile. Several weeks previous to the trial, our attorney submitted a list of propositions and requested that we consider them carefully. We held three meetings. I introduce these premises and my comments at this point because much of the context was offered as testimony.

1. Roland is a high-grade imbecile or moron.

Yes. A high-grade imbecile is a person who by reason of a faulty development of brain structure is permanently unfitted to assume the responsibilities that his age and previous training would warrant. Such a person under proper training and environment may become proficient in the arts and crafts, but because of lack of judgment and moral control, he is almost certain to violate the rights of his fellow-man when left unguided. (This definition was offered on the stand and was unchallenged.)

2. This means a mentality of about a eleven-year-old boy.

Yes.

3. This results from a constitutional defect.

Yes.

4. His failure in school was due to this defect.

Yes.

5. The cause of this defect from a physical standpoint is not known, if such is the case.

The defect is due to a subnormal development of brain cell--both quantitative and qualitative.

6. It is not a thing that can be cured—it is something lacking.

Correct.

7. It is to be distinguished from insanity—if such is the fact—and what is the difference.

Insanity, being a disease, is sometimes amenable to treatment; imbecility being a condition of arrested development in health, is incurable.

8. That such minds, and of course Roland's, cannot project themselves beyond and see the consequences of their act.

Roland knew that he could be punished for his act. This abstract knowledge of what he must do and must not do is not engendered through any agency of conscious process, such as judgment. It has its analogy in the mind of all children who must first be taught right from wrong. But if the child develops normally he will soon perceive *why* certain acts are wrong. It is right at this point that Roland manifests his moral and mental defect. Roland is not *sui generis*. I personally know hundreds of imbeciles who cannot fully appreciate wrongdoing in the concrete.

9. That they lack all sense of proportion—would also like to have some good illustration of this.

Only the lowest grades of imbecility show a lack of *all* sense of proportion. This sense of values is in ratio to their mental grade.

10. That they are easily influenced by the suggestion of a stronger mind, with illustrations.

Obstinacy is quite compatible with the imbecile mind but I have yet to meet the imbecile who may not be influenced by a stronger and *more subtle* mind.

11. That because they have no real sense of right and wrong (notwithstanding they may phonographically reel off a long list of them) they can be influenced to commit crime, with illustrations.

Correct.

12. That having no opinion of their own as to the right and wrong of a given suggestion, they don't recognize in the concrete that which they would tell you is wrong in the abstract.

Correct.

13. That in the abstract Roland would say it was wrong to kill a human, not because he really felt it, but because he has been told so. (This will probably come up in the form of the question—"Could Roland distinguish between the right and wrong of George M.'s suggestion?" If this cannot be answered categorically, say so. But explain as above indicated, if that is your opinion.)

Correct, as explained in No. 8. His moral sense is no higher than that of the young child for whom the meaning of the Golden Rule is as yet vague.

14. That under all the circumstances of the case—viewing the matter in the concrete—Roland did not go forward with a fully formed conscious purpose to kill and intention to carry out that purpose.

It is my firm conviction that the crime could not have been consummated by a mind like Roland's. He was without doubt dominated by a stronger personality. The attorney's queries on page No. 63 (of Roland's confession) suggest the answer that the questioner wanted—"You did this, you expected that, you knew this and that, didn't you?" Roland answers, "I guess so." Suggestibility is an imbecile trait. It is my opinion that Roland did realize that he might cause his victim's death. Having no moral scruples and a weak volition, he is the typical weakling. Such a boy almost inevitably falls victim of the vicious.

15. That at the time he went into the stable he was devoid of thought and proceeded under the impulse of George M.'s suggestion.

When Roland enticed his victim into the stall with the fictitious nail pretext, he used cunning and was therefore not in a state of marked mental confusion. He did act under the impulse of George M.'s suggestion and was practically without power to recede from this position to which he had been carried.

16. That he was not then conscious of the right and wrong of the suggestion.

He has no more real consciousness of right and wrong than a child of four. To be sure, experience has taught

him to avoid trouble under *normal* conditions. Place him in the power of a scoundrel and he must do his bidding.

The four physicians who served the attorney so zealously by declaring Roland's cousin of sound intelligence, were equally obliging when the prosecutor required their judgment as to Roland's mental status, for they forthwith discovered that the latter is also of normal mind. This belief they asseverated in court. Of course they could not confute the evidence of the boy's abnormal development in school—as already stated, two teachers testified as to his retardation and presented school records to corroborate their testimony. The irrationality of his behavior, both before and after the crime, was not denied. The experts admitted Roland's peculiarities but preferred to dissociate his foibles from his intellectual attributes. I submit that where there is a specific history of early mental retardation, this dissociation of emotional and volitional defect from the content of intelligence is obviously unfair and unscientific. The writer claims no profundity for the thought.

We presented our evidence of the prisoner's emotional, volitional and intellectual inferiority or defect as simply and concisely as is possible. The jury was composed of farmers, artisans, and laborers. Much difficulty was encountered in selecting these men; the talent in Chester and Delaware Counties is essentially of Quaker extraction and for capital punishment this sect has a very proper aversion. It follows that many were called and few were chosen.

The attorney for the defense pleaded for a verdict of second degree murder. In his address to the jury he said: "The prisoner, though physically of man's stature, is mentally a boy in short pants." More elegantly, perhaps: "Although the law attempts to regulate the normal mind, it does not hold to strict responsibility the visitations of God."

The Judge charged the jury as follows:

"The first point you must consider is, 'Was this killing done in the perpetration of, or an attempt to

perpetrate a robbery and if so was the defendant afflicted with a mental disease which enabled George M. to dominate his conduct in such a manner that he could not resist him?" If so, he was not guilty of murder in the first degree and you should acquit him because he would not be responsible in law.

"If you should find it was not done in the perpetration of, or attempt to perpetrate a robbery, then it was murder in the second degree.

"The great battle in this case has been fought over the question of whether or not the defendant is entirely normal. You have heard the evidence, you have seen him here, and it is for you to judge.

"This is probably the most important duty you will ever be called upon to perform. Of course there is sympathy for this young man and his mother and father, and for the mother and father of the young man who was killed, but that is no part of your province. Do not let that enter into your deliberations, for if you do you will do a greater wrong than you will ever be able to undo."

The jury at first disagreed, a few voting the prisoner normal and the rest expressing opposite conviction. After many hours deliberation, they returned an unanimous verdict—guilty of murder in the first degree.

Now in a court of common pleas, it is easily conceivable why jurors disagree on doubtful points of evidence and counter evidence. But in this particular case there was presented no concrete counter evidence; twelve men listened to the evidence of experts; they presumably availed themselves of the ample opportunity to study the prisoner as he sat in the court room; they listened to counter evidence which consisted only of the inanities of a mediocre prosecuting attorney.

We therefore felt that the jury would give Roland the benefit of uncertainty; indeed, one might reasonably expect that if there were even a shadow of uncertainty as to the culprit's mental status, that doubt alone should deter an honest man from rendering a first degree verdict.

Those members of the jury who believed Roland imbecilic, held out for what must have been a long twenty-four hours—an ordeal well calculated to weaken their earlier convictions. I can construe their vacillation in no other way. Of course, these men were unschooled in matters pertaining to imbecility and were therefore educationally unqualified to solve the problem assigned them.

The trouble lies in this: our method of choosing juries is ludicrous. Is there a judge in the great United States who has not had occasion to smile at the personnel of some of these nondescript aggregations?

It would seem that the most desirable juror is the man who has no opinions, or, in the event of his having ideas, lacks either the ability or the interest to express them. Behold then, the expert, holding forth in all sincerity and faith, and in manner deferential—expatiating matters psychological to plow-boys and negro coachmen! A tribunal so chosen is in no ways competent to decide the fate of a brother in misfortune—of that am I convinced.

Roland must receive the same brand of justice that has been meted out since the days of Medievalism.

Should this boy be liberated? Certainly not. Inherently abnormal, lacking wholly the qualities of love, pity, altruism and remorse, constitutionally unmoral, emotionally undeveloped, unable to adapt himself to the disparities of our social life—such a nature constitutes a distinct menace to the community. One would think that his colorless temperament, mental retardation, and all the desultory habits of his childhood, might have had some significance to his teachers and early associates; that some means might have been found to protect him from vicious companionship. He was always considered eccentric, but I am inclined to believe that no physician, teacher, or friend had ever correctly interpreted his actions. Had his defect been recognized early and provision made for his permanent sequestration in a suitable institution, he would have proved tractable and adaptable. He is not wilfully vicious. I personally know dozens

of imbeciles who are not criminally inclined, and yet, under the baneful influence of a strong or a subtle mind, the most kindly might succumb to Roland's temptation.

Society—whose zeal in punishing these unfortunates is only equalled by its blindness to underlying causes of their delinquency—society adopts punitive measures where prevention would prove humane and economical. But the public will learn—is learning its lesson. As physicians, we should be teachers and propagandists—let thought ripen into action. We have long been content with a semblance—let us have the substance.

In this story of an irresponsible type, I have endeavored to emphasize the importance of an early recognition of the imbecile. My efforts may serve also to indicate the difficulties encountered when, in court, an alienist assumes the role of protector of the high grade mentally deficient. If Roland were unable to read or write, or if he presented the drooling mouth, silly chatter, and the marked somatic stigmata of the lower grades—our problem would have been simple indeed. Had we been able to show that the boy had been formerly an inmate of an institution, that point, beyond peradventure, would have convinced the jury of the boy's mental inferiority.

Roland should be punished. That little epigram "for sparing justice feeds iniquity" is a precept to which all criminologists must subscribe. But his punishment should be of nature, remedial—not homicidal; his sentence should be commuted to life imprisonment.



These photographs of Roland were taken in the yard of the jail. The prisoner has been confined since December, 1913 and notwithstanding an uniformly good appetite, he has lost considerable weight. Since his conviction he has been out of his cell only once and that brief respite was granted when I visited the jail and secured these pictures. The warden states that the prisoner's conduct is in every respect exemplary.

THE HARRISON ANTI-NARCOTIC LAW. ITS HELP AND ITS HARM.

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Psychological Assn. Honorary Member British
Medico-Psychological Ass. Etc. etc.

THIS law will arrest the present alarming growth and peril of narcotic addiction as to novices forming the ruinous habit of opium and cocaine taking, by those ignorant of the pernicious sequences of habitual non medically prescribed opium and cocaine taking, but on the other hand, what is to become, in the present state of public ignorance among policemen and others, of the misery of these enthralled habitués when the drug is suddenly taken from them by inexperienced physicians?

Dispensaries for gradual withdrawal, relief and temporary substitution should have been suggested and provided for in the Harrison Bill. The author of this meritorious bill has overlooked this miserable feature of the terrible narcotic drug addiction evil and therefore failed to add suggestive caution and possible provision for the miserable victims of the too sudden deprivation. The unhappy victim of the opium or cocaine habit, suddenly deprived of his accustomed drug, suffers beyond conception, (by the clinically unfamiliar). Only the very strong and recent addicts can stand complete sudden withdrawal of the drug without the wisest substitution and most discreet and discriminating management.

When the daily dosage (enormous doses) to which many of the pitiable victims become accustomed, is suddenly out of their reach, they suffer tortures inconceivable. They are sick and distorted in mind. They become restless, vague, erratic, untruthful and often criminal, perverse and in many other ways display astonishing mental abnormalities, that are incomprehensible except on the assumed basis of fiendish criminality, as the ignorant regard them, or as diseased, as all truly clinically experienced know them to be. The ignorant cruelly or inconsiderately call them "fiends," "dope fiends," (a most uncharitable, cruel and ignorant misnomer.)

Their actions and speech deceive courts, jurors, police officers and other public officials and sometimes the best and most intimate friends misjudge them.

Pity them, succor them. They need medical concern and care and public consideration perhaps more so than the helpless confirmed alcohol poisoned inebriate.

In the list of exemptions Camphorated Tincture of Opium U. S. P. (paregoric) erroneously appears and a number of mildly opiated cough mixtures, while opiated lozenges are not exempted. The opium habit may be formed from these. The writer knows of one instance where a physician's direction to take moderate medical doses of paregoric developed the habit, through copy and refilling at different drug stores and finally through getting the same on personal verbal order. This party acquired the habit of taking a drachm of sulphate of morphia at a dose and finally died in consequence of sudden deprivation and heart paralysis.

The police are often as ignorant of their real morbid states as they too often are of the normal citizen's personal rights. One of them having recently in St. Louis slapped a pharmacist for refusing him access to the prescription counter, in search, without warrant and on his own notion, for a woman he suspected was there.

The danger of getting the opium habit and the cocaine habit likewise is in the voluntary repetition at

different pharmacies and through different doctors' prescription for the same, painful condition as the patient represented himself to have and as he does have under deprivation, if the quantity of opium taken is great and withheld.

Any prescription for internal use that has opium or coca or their derivatives should only be obtainable on a reputable registered physician's prescription, except apomorphia and this nausea producing alkaloid is (singularly) prohibited in this bill.

But this law, though onerous to the physician, is aiming in the right direction for popular safety from narcotic drug addiction and community damage and degeneration and will be perfected in time for completer public safety, in regard to this deplorable harmful evil of self medication; all too common for the people's welfare as to personal stamina and citizenship qualification of that high standard needed for the stability and perpetuity of our great Republic:

This law will prove especially valuable as a safeguard to neuralgia subjects, to surgical "after care" cases and in victims of cancer and other painful diseases, to diabetics also, where opium and its derivatives, morphia, codia, etc., are considered essential to successful treatment.

(By the way and in parentheses we would here remark that some authors do not advise with sufficient caution in view of possible danger of the formation of this pernicious habit, in regard to the use of opium, in diabetes, Struempell for instance.)

He says, of internal remedies, opium should be named first. A patient can take four to eight grains of opium (0.25 to 0.50 grm.) or even more, in twenty four hours, without bad effect. (Vickery and Knapp—Translation, Shattuck, Editor.) Dr. Shattuck thinks Struempell does not do justice to codia, etc. and, though not germane to our subject, we in passing, concur, especially as to codia, since codia appears less likely to create the opium habit craving and, as a thirst quencher, for which Struempell

advises opium (and sugar excretion arrest also), opiates are rather provocatives than assuagers.

Following is the Physicians' Federal Opium and Coca Law¹. For this epitome we are indebted to D. O. Haynes & Co., Publishers of the Era, New York, N. Y. who put on the market a physicians' register for record of these narcotics, as the law requires.

RELATING TO THE PRODUCTION, IMPORTATION, MANUFACTURING, COMPOUNDING, SALE, DISPENSING OR GIVING AWAY OF OPIUM OR COCA LEAVES, THEIR SALTS, DERIVATIVES OR PREPARATIONS.

BY ACT OF CONGRESS APPROVED DECEMBER 17, 1914

Each Physician, Dentist and Veterinary Surgeon who prescribes or dispenses any of the drugs which come under the provisions of this law is required:

1. To register with the Internal Revenue Collector of his District, on or before March 1, 1915; to pay a tax of \$1.00 a year (34c to June 30, 1915) and obtain his Registry Number, also a supply of special Order Blanks.
2. To prepare on March 1, 1915 and keep on file an Inventory of all such drugs and preparations he has on hand at that date, which must be verified by oath not later than March 5, 1915.
3. To use the special Order Blanks for all such goods as he orders and to keep a duplicate of each order on file for at least two (2) years, accessible to official inspectors.
4. To sign all prescriptions that he writes for these drugs with his full name and his registry number, together with the date as issued and the location of his office, also the name and address of the person for whom such prescription is written.
5. To keep a Record Book of all such drugs dispensed or distributed by him (at his office) showing: (a) the date when dispensed or distributed, (b) the kind of drug and quantity and (c) the name and residence of the patient.

The medical profession, with its accustomed philanthropy, and over looking for the time being its defects, will hail this Harrison Bill with pleasure, knowing the Iliad of woes it will avert from humanity in preventing the often innocent formation, by unmedically prescribing repetition of certain narcotic and anodyne dosages after the need of them shall have ceased. But it will not overlook its defects in including in its restrictions so many non-habit-forming agents as it has, whereas opium, cocaine and chloral and certain of the coal tar derivatives are the chiefly perilous therapeutic agents and accepting minimum doses of opium and its derivatives, such as morphia, in

1.—Harrison Law.

cough lozenges and mixtures, whereas the peril is in the minute doses too often repeated without medical advice and prescription or contrary thereto.

The penalty of this bill for those who are innocent of the harm and horrors of the opium is too severe, and hardly severe enough for the inhuman creatures who, knowing the life wrecking potency of the habit, would foster it for purposes of personal profit.

The bill should have contained a warning of the misery of non-medically prescribed doses duplicated, quadruplicated, even quintuplicated for their fatally pleasurable effect and suggested remedial measures for the wrecked creatures of sudden complete deprivation (clandestine Chinese opium smoking dens should be put out of existence) under lawful surveillance.

It has been a generation of decades* since the present author wrote his first warning paper on the subject of the opium habit, even before cocaine came into its present fatal habit use and the rapid growth of the habit since that warning was written is now terrible to contemplate. But since then, the knowledge of the fatal final happiness and health destroying power of both drugs has grown in medical circles, with its evil among the innocent populace and it is gratifying to know that through the very sources that at first made the evil a possibility, by injudicious prescribing and dispensing, exists a remedy and rescue through the provisions of this timely warning and saving law.

We notice with pain and surprise that men so intelligent as the average city news writer, especially of St. Louis, should continue to characterize these unfortunate victims of a seriously damaged mind and nervous system destroying drug disease who are innocent, ignorant victims mostly, not of their own choosing, of a habit usually began for relief of some real or imaginary medical need, should characterize them as fiends. A long time has elapsed since the unfortunate but gifted DeQuincey,

*The Opium Psycho-Neurosis-Chronic Meconism or Papaverism. *Alienist and Neurologist*, Vol. 5. p. 122 et seq. Revised for author's book, *The Neurological Practice of Medicine*, but not published. It will appear in the next issue of this Magazine.

with whom every literary man is supposed to be familiar, wrote his "Confession" detailing the "Horrors of opium abstinence" as he realized them in his own person when his daily dose was out of him and likewise Coleridge's self recorded experience.

The chief peril of the abrupt withdrawal of opium, especially from any but the young, very vigorous and non-chronic habitues is the tendency to complete collapse, heart failure, delirium, insanity and death under sudden complete deprivation of the accustomed dosage, such as is sometimes enforced by impecuniosity, etc. The quantity of drug taken should be ascertained, if possible, and quinine substituted (two grains for one of each grain of morphine withdrawn). More than half the morphine habitually taken daily should never be withdrawn from the opium victim at once.

To suddenly shut off from a chronic opium eater all his drug at once is a murderous crime in certain extreme cases, especially without narcotic substitutes. Cocaine may be helpfully substituted temporarily for opium and vice versa—chloral hydrate of nights and ammonium bromide, hypophosphites and malted and peptomized nutrients, belladonna, hyoscyamus, etc.

But the unarmful treatment of the opium habitue calls for expert and experienced management to avert bad sequences to the unfortunate victim of this pernicious and perilous habit. Egotistical conception of what ought to be done in these cases is not a substitute for clinical experience. The right and safe management of these cases is a phase of clinical psychiatry, the proper experience of which is not possessed by any physician whose practical understanding of it is not special.

The proper place and persons are the institutions and physicians especially familiar with these cases, particularly in the safe conduct to recovery of the long time addicted slaves to the destructive habit. The danger is in the abrupt withdrawal rather than in the continued gradually reduced allowance, till nature's powers to resist withdrawal are gradually restored.

Copy of Safety Prescription Blank

DR. C. H. HUGHES,
3858 W. PINE BOUL., St. LOUIS, Mo.
HOURS: 9:30 to 10:30 a.m., Sundays, by Special
Appointment Only.
Bell Phone.

Pharmacist will please retain this Prescription, neither
copy nor repeat without instructions from me.

This memorandum of instructions to the pharmacist we have used for over forty years at the head of our prescription blanks, based on what we have known of the peril and harm of injudicious renewals of certain medicines, thus conserving the prescriber's real purpose of so much and such a quantity for the case and time.

FINAL NOTE—More than forty years ago the writer of this paper was interested in a St. Louis Hospital for the treatment of the opium habit in association with another medical gentleman, and was regarded by at least one otherwise intelligent medical practitioner, as in error because he considered the opium habit as a drug poison disease instead of a more vicious habit which could be easily abandoned at will.

The vigilance, close attention and steady burden of rightly managing these often trying cases, compelled the abandonment of this work, as other demands of practice increased and good establishments, such as now exist, became plentifully established to meet the increasing demand for the care and treatment of these drug damaged unfortunates.

CYST OF THE LATERAL VENTRICLE.

BY G. FRANK LYDSTON, M. D.,

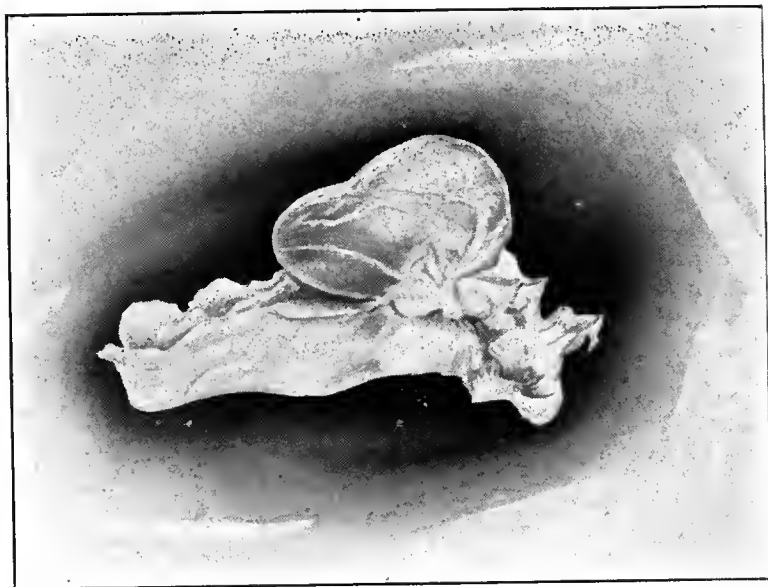
Chicago.

CYSTS of the brain in general are frequently met with. They vary widely in origin, structure and contents, so widely indeed, that the nomenclature covers conditions so widely different that, in some instances, it really is stretching a point to use the term "cyst."

Any tumor of the brain which consists of a more or less definite "enclosing" tissue forming a cavity of greater or less extent containing fluid or semisolid material, is classified as a "cyst."

Obviously, the etiology and morbid anatomy of brain cysts necessarily must be quite comprehensive; thus they may be due to: 1. (a) External trauma, producing a blood clot which is imperfectly absorbed or organized, forming a soft grumous mass of greater or less consistency and varying quantity, (b) Internal trauma, as by spontaneous rupture of diseased blood vessels, or rupture from violence to the cranium; 2. Parasitic invasion, e.g., by the echinococcus; 3. Cystic degeneration of malignant neoplasm—sarcoma or carcinoma; 4. Cystic degeneration—softening of guma; 5. Simple arachnoidean cysts. Some of these latter probably are traumatic and due to slight hemorrhages, others to simple occlusion.

The symptomatology and treatment of brain cysts will not be touched upon here, as it is my intention merely to record a most interesting case which obviously would not have been amenable to surgical intervention, even though a diagnosis had been made before death.



CYST OF LEFT LATERAL VENTRICLE. ENLARGED ONE-THIRD.

CASE: Man aged twenty-one. Occupation clerk. Had suffered from periodic, severe headaches and perturbation of vision for five years. Nothing else could be elicited in regard to the history, nor could any information be obtained as to the treatment he received.

The subject was seized with one of his severe headaches and speedily lapsed into coma. Dr. Thos. J. Sullivan was called to see the case, which by this time was in an apparently hopeless condition. Death occurred one hour later, the subject not reacting from coma.

Dr. Sullivan very wisely refused to sign a death certificate and the case was referred to the coroner. It is therefore, primarily due to Dr. Sullivan that I had the opportunity of securing the specimen. Through the courtesy of Dr. Jos. Springer, I assisted at the autopsy.

The subject was normal throughout save as to the brain. There was a large amount of sub-arachnoid

effusion with enormous distention of the ventricles. There were no hemorrhages or other evidence of disease. On the floor of the left ventricle in the anterior cornu, close beside the septum was found the cyst herewith depicted. It fortunately was not ruptured in removal. The cyst apparently was simple, its walls being perfectly translucent and its contents clear fluid of a slightly yellowish tinge. It apparently was a retention cyst and originated in the ependyma. Its analogy to simple arachnoid cyst at once suggests itself. No microscopic study of the cyst was made, merely because its character seemed clear and I did not wish to destroy so beautiful a specimen. In a fairly extensive search through the literature I have not found a similar case.

32 N. State St.

IS GENIUS A SPORT, A NEUROSIS, OR A CHILD POTENTIALITY DEVELOPED?*

BY JAMES G. KIERNAN,

Chicago, Ill.

Formerly Assistant Physician Manhattan State Hospital
(1874-8) and Superintendent Chicago State Hospital
(1884-9)

Fellow Chicago Academy of Medicine, Foreign Associate Member French
Medico-Psychological Association; Honorary Member Chicago Neuro-
logic Society, Honorary President Section of Nervous and Mental
Diseases Pan-American Congress 1893, Chairman Section on
Nervous and Mental Diseases American Medical Asso-
ciation 1894; Professor Neurology Chicago Post-
Graduate School 1903; Professor of Nervous and
Mental Diseases Milwaukee Medical Col-
lege 1894-5; Professor of Nervous and
Mental Diseases Medical Depart-
ment Loyola University 1905;
Professor of Forensic Psychi-
atry Kent-Chicago
College of Law.

ONE unrecognized obstacle to eugenics is the popular belief in the healthy significance of childhood and adolescent lipomatosis. Metabolic researches have taught the populace that adult obesity is often but a morbid sub-oxidation. That the reverse tendency obtains among eugenists toward childhood and adolescent lipomatosis is shown by their marriage health certificates. Lipomatosis, as Fere¹ shows, occurs at periods of stress from the end of the first dentition until the climacteric. As was pointed out years ago² Byron and his mother had this lipomatosis. Byron did not become immediately obese until he stopped growing at twenty: such obesity, first described by Cruveilhier, is an expression of nutritive stress in descendants of defectives and instabilities.

* Continued from The Alienist and Neurologist, August, 1914.

There is great liability to disease and tendency to systemic weakness when under morbid influence. These children are particularly liable to rheumatism, gout, scurvy, etc., and great haemorrhage from slight causes. Youthful obesity is sometimes associated with precocious maturity and resultant early senescence. Often it co-exists with narcolepsy and extended infantilism, as in the case of Dickens' "fat boy."

Owing to the struggle for existence which occurs at puberty between the old type of the chondrocranium and its new type as supplemented by the dermal bones, the nervous system may take a distorted ply which arrests bodily, nervous and mental development at certain points. In infantilism the arrest is of the future promise of the child, so that body and face remain at the childish point, or body and nervous system are checked, or finally the nervous system or certain organs alone are checked while the body goes on to full development. Not infrequently the face is arrested at any period from birth to puberty. Hence many persons retain a youthful appearance through life. Often these are vain and egotistic. The mental stamina is weak. They are frequently unreliable. The females are often sexually anesthetic prostitutes, prurient prudes, hysteric reformers, or gossip-mongers.

E. S. Talbot,³ examining 267 corpulent school children and adults, found that nearly all had marked stigmata of degeneracy. Ninety-two per cent. had markedly deformed ears. Sixty-six per cent. had arrested facial development, as compared with their age, while twelve per cent. presented excessive development. Thirty-four were too young to determine the form and size of the jaw. In thirty-three and a half per cent. of the thirty-four the molars, incisors, cuspids and bicuspid were present. Ninety-six per cent. of these had small teeth. Eighty-seven per cent. (of the 233) had arrested development of the upper jaw. Twenty-two per cent. arrest of lower jaw. Sixty-four per cent. had V-shaped or saddle shaped arches or their modification and protruding teeth. Seventeen per cent. had hypertrophy of the alveolar

process. Eighty-three per cent. had small teeth. Twenty-seven per cent. had extra tubercles upon the molars. Eighty-two per cent. had stenosis of the nasal cavity more or less marked. Thirty-six per cent. had deflection of the nasal septum to the left and twenty-nine per cent. to the right. Twenty-one per cent. wore glasses for eye defect. In fifty-eight per cent. there was chyroid enlargement and in seven per cent. arrested development of it.

In 296 cases of puberty lipomatosis (180 males and 116 females) coming under observation, ten were cryptorchids, six hypospadiacs and three cases of pseudo-hermaphroditism. Three females had infantile bifid uteri. Four had enlarged clitorides; in one of these the urethra perforated the clitoris as in the female shrew (sorex.) Of forty girls who had reached the age of eighteen but three menstruated normally. The others were amenorrhoeic or dysmenorrhoeic, or had neurotic storms during the period. There were 160 hebephreniacs among the number; of these 120 masturbated excessively. Ten had been nymphomaniac or satyriasic, the sexual appetite became completely extinct at eighteen. Fifty of the non-hebephreniacs never showed any signs of sexual appetite. Three of the hebephreniacs were sexual invert, while eighty practiced various perversities. Of the non-hebephreniacs ten were cyclothymiacs, thirty had had acute forms of insanity, ten were epileptic and fifteen hysteric. Thirteen had had chorea. Ninety-seven had difficulty in learning to speak and thirty always stuttered.

The mental relations of obesity are much more extended than is usually supposed. Some years ago Theophile Gautier⁴ remarked that Victor Hugo, who as the sovereign prince of French romantic poetry, should be (were ordinary opinion as to poets correct) angular, with light or dark hair and pink complexion. The world and an overcoat could hardly contain the glory of Victor Hugo's belly. He burst his button band every day and as for buttons in front they were snapped off continually. Victor Hugo's embonpoint was most richly

deserved for his plate was a *mixtum compositum* of veal cutlets, lima beans and oil, roast beef and tomato sauce, omelettes, milk and vinegar, mustard and cheese, which he swallowed rapidly and in immense amounts while drinking coffee. Rossini had not been able to see his feet over his abdomen for six years ere his death. He was a hippopotamus in trousers. Jules Janin would break down any eighteenth century sofa on which he might happen to sit. The Africanism of Alexander Dumas' passions did not prevent the author of "The Three Guardsmen" from being very plump. He ate three beefsteaks where any other fat man ate one. Saint Beuve saw his abdomen bulge under his goatee. The most fertile of all French romancers, Balzac, looked more like a hog's head than a man.

Eugene Sue, of the "Mysteries of Paris," was greatly grieved when he could no longer see over his stomach. Theophile Gautier merited a place among obese literary gods; Renan, Maupassant, Flaubert and Sarcey were to be there classed. Most of these victims of obesity (which as a rule came early) had neurotic taint. In Balzac, according to Nisbet,⁵ there was a converging heredity of nerve disorder. His maternal grandfather died of apoplexy and his mother was a woman of great vivacity of mind, untiring activity and extraordinary firmness. In many respects she displayed the egotism of the born neuropath. On the father's side there was a pronounced strain of insanity. The father was a lawyer at Tours. Although perfectly well in body, he took it into his head one day to lie in bed and this he did continuously for twenty years thereafter, receiving his friends meanwhile and even taking part in public affairs. To everybody's surprise he got up one morning at half past four, dressed and went about his business as if nothing had happened. He had an extraordinary memory. Balzac exhibited between the thirteenth and fifteenth year a tendency to obesity. He had, while at school, an epileptoid seizure which so alarmed his teachers that they urged his parents to take him home. Balzac,

an omnivorous reader, cut a poor figure at school. His epileptoid attack never returned.

Victor Hugo's brother, who died at thirty-seven in an insane hospital, was a quick, precocious child. He had poetical tastes and achieved some distinction at school. He broke down at puberty and passed into hebephreniac dementia. General Hugo, the poet's father, was an irritable, obstinate, peculiar man, who fell into disgrace with his military superiors, separated from his wife and passed his declining years in profuse scribbling. Biography, fiction and drama were poured forth in showers. Victor Hugo's mother was an energetic, sensitive woman of literary tastes, who broke down early into a neuropath and died suddenly.

The environmental influence of her husband must be taken into account.

Factors entering into fetal environment influence progress. Maternal strength hence plays an important part. Much alleged heredity, charged to paternal defects, arises from the influence of these on maternal nutrition. Albeit paternal deficiencies are present at marriage, the influence of these is very often not obvious until one or more children have been born. The influence of paternal defects in producing maternal neurasthenia must therefore be taken into account.

Most hereditary defects are expressions of weakness along lines of least resistance and not due to direct inheritance. Epilepsy is often an expression of inability to pass periods of stress without motor explosions. It therefore expresses an arrest of development at certain phases in childhood. Through ignorance of this fact convulsive disorders of childhood often pass into epilepsy. Through that law of the nervous system whereby nerve action, once occurring, has a tendency to recur, habits are established.

Heredity obeys no absolute law in details, but is governed by a struggle between contending forces. Initial hereditary velocity is an important factor, but so likewise is intra- and extra-uterine environment, especially as

constituted by maternal strength during intra-uterine periods, during periods of nutrition by the mother, and during periods when the child is under maternal training. Heredity is a prophecy of what *may* be, not a destiny which *must* be.

Rossini had imbeciles among his maternal relatives. He suffered from irregularly periodical melancholia.

Flaubert had a nervous strain which evinced itself in epilepsy during puberty stress. Previous to his paroxysms he was accustomed to see a flame, first in one eye then in the other, and then everything appeared to him under a yellow hue. A year or two before the onset of the epilepsy Flaubert's intelligence and intellectual power were observed to develop enormously. Afterwards Flaubert's memory became fitful. He lapsed into a dreamy, indolent state and at times was so petulant and irritable as to be upset by a trifle. He would run about the room uttering cries because his pen knife was out of its ordinary place. His mother was a neuropath and a sister died insane. His nephew, de Maupassant, died from paretic dementia which took on the rapid type, not the protracted one usual in hereditary taint and from this Gautier also died.

Flaubert sprang from a family of physicians. His maternal grandfather was eminent in the profession and so were his father and brother. His maternal grandmother was a playmate of Charlotte Corday who was a republican before 1789. His father had a bourgeois contempt for art and literature whence came estrangement between father and son. The mother was congenial. In "*Madame Bovary*"⁶ Eleanor Marx Aveling finds "the great physician's infinite patience in observation, his quick power of diagnosis, his inexorable calm and determination, his kindly yet somewhat contemptuous pity for every form of human weakness. Nothing escapes him; not the most secret thoughts or the most carefully hidden human infirmities."

Flaubert was taught to read with difficulty and only did so perfectly at nine. His great passion in childhood,

according to de Maupassant, was to have stories told him. Then he remained for hours dreaming. His mind was at work for he had already composed pieces which he could not write but acted by himself, improvising long dialogues. He was regarded as an adolescent cupid from his beauty then.

While Shakespere⁷ gives plotter Cassius "a lean and hungry look" yet his typical trickster⁸ Falstaff is as "fat as butter larding the lean earth as he walks along." Wilkie Collins⁹ depicts an extremely obese zoaphiliac moral imbecile, Count Fosco, as replete with shallow sentiment of which Carlisle¹⁰ says "beautiful sentiment, thou art better than nothing and also worse." Flaubert portrays a shallow egocentric philoneistic (lover of the new) sentiment in Madame Bovary as a phase of hysteria. She has the nervous cough¹¹, etc., of hysteria. As depicted, it resembles allied states in criminals who remarks Havelock Ellis¹², "craves for some powerful stimulant excitement, uproar to lift him out of his habitual inertia."

Egocentric, like the desire for new sensations in the hysteric, this differs totally in kind from an intellectual yearning for newer truths. This same forced analogy between Bovarism and yearning for intellectual truth was drawn by Kuehne Beveridge,¹³ who in an interview on her statue's success at Berlin, claimed it represented human bouyancy and exaltation through deep sense of sex. She regards active algolagnia like that of "Jack the Ripper" as a like expression. This view is so especially common among certain artists, literati and critics that it tends to foster the egocentric spirit whether an expression of precocity or of imperfectly evolved adolescence. It is undeniably true, as Ellice Hopkins¹⁴ remarks, that many girls get into mischief merely because they have in them an element of the black kitten which must frolic and play but has no desire to get into danger. "Do not you think it a little hard," she remarks, "that men should have dug by the side of her foolish dancing feet a bottomless pit and that she cannot have her jump and fun in safety and put on her fine feathers like the silly bird

witted thing that she is, without a single false step dashing her over the brink and leaving her with the very womanhood dashed out of her."

The difference in type between one who consciously has her fun at others' expense and one deeply considerate of others is not recognized in these forced analogies. The true nature of intellectual yearning for truth appears vividly in Emerson's "Sphinx."

"The fiend that man harries
Is love of the best,
Yawns the pit of the Dragon,
Lit by rays of the blest.
The lethe of Nature
Can't trance him again,
Whose soul sees the perfect
His eyes seek in vain."

This, as Harriet Alexander points out, is but a paraphrase of Malthus¹⁵ who says that "the impressions and excitements of this world are but the instruments by which the Supreme Being forms matter into mind."

The philoneistic morbidity of Madame Bovary (albeit he does not recognize its hysteric egocentricity) is designated by Jules Gaultier¹⁶ 'Bovarism.' This is a desire to be other than what one is. It implies therefore a reaching after ideals. This may be an expression of involution as well as of evolution dependent upon whether it result from the primary or secondary ego, the mere aspiration for an ideal does settle its origin.

Development of a complex mental state tends to control a simple explosive prosperity in accordance with the law that evolution proceeds from the simple indefinite homogeneous to the complex definite heterogeneous, with a loss of explosive force. The forebrain, which increases in size with evolution, is a checking apparatus against the lower, more destructive natural impulses. The higher its development, the greater is the tendency to subordinate the particular to the general. Even in the lower animals a high state of social growths occur, as in the bee and ant communities. The same is the case in the development of man; in the infant a being entirely wrapped up in its instincts of self-preservation, the primary ego is pre-

dominant and the child is an egotistic parasite. As evolution proceeds this standpoint is passed, conscience assumes its priority, the forebrain acts as a check on purely vegetative functions and the secondary ego takes precedence over the primary. This is the usual order of civilization in its advance.¹⁴

The hysteric smashing valuable porcelain from the sadistic sense of pain given others is lower in type than the paranoiac¹⁷ who, asked why he smashed his chair, replied: "Philosophy must conquer aesthetics." His symbolism had a higher ethical intellectualism than her sadism. Gaultier like most "psychologists" ignores the essential elements of the psychologic moment, the general mental state of the subject; the mental state at the time the excitant was applied and the nature and influence of the excitant. Havelock Ellis¹⁸ accepting *Bovaryism* from Gaultier as a title for a patent biological force, ignores these relations likewise when he remarks: "It often impresses me with wonder that in Nature or in Art exquisite beauty is apt to appear other than it is." Jules de Gaultier seeks to apply to human life a principle of *Bovaryism* by which we always naturally seek to appear other than we are, as "Madame Bovary sought as sought all Flaubert's personalities, and indeed, less consciously on their creator's part, as claims the great figures in all fiction. But sometimes I ask myself whether there is not in Nature herself a touch of Madame Bovary."

"There is, however, this difference in the *Bovaryism* of Nature's exquisite movements; they seem other than they are, not by seeming more than but by seeming less." This seeming differs in kind from that of "Madame Bovary," as Mayne Reid¹⁹ years ago remarked "every truth is overshadowed by a sophism more like truth than truth itself, a sophism constituted by that tyranny of the obvious against which Dryden thus protested:

"Errors like straws upon the surface float

Who'd seek for truth and pearls must dive below."

Madame Bovary has been for decades to cultured physicians the type hysteric of fiction. To place her upon

the pedestal of "Bovarism" is to defy explosive force and decry those calm workings of Nature of which Goethe²⁰ sang.

"Nature, the living current of her powers,
Was never bound to day and night and hours,
She makes each form by rules that never fail,
And it is not Force even on a mighty scale.

Hysteria, unlike what Ellis calls "Bovarism" in Nature, always seems immensely more than it is. Flaubert's epilepsy never betrayed him into occultism or affinity for Charlatanism. His great charlatan Honeass; the prescribing druggist is exquisitely painted from a medical standpoint in all his sophomoric intriguing meanness.

Balzac, albeit not behind his period, has the newspaper sympathy with charlatanism, occultism and spiritualism²². Like Besant²³ Garland, Hichens²⁴, Howells²⁵, Henry James²⁶, who, though to a lesser degree, exhibits such a peculiar religiosity in a novel which the late G. F. Shradly of the Medical Record called a hair raiser, as to picture a woman under the "control" of a dead boy sexual perversity. The charlatan sympathy of Balzac appears prominent in "Miss Bernard"²⁸, who becoming pregnant for a second time after her marriage, displays "such singular symptoms that the physicians were all puzzled. The child was stillborn; literally strangled by internal convulsions. Then came on a general debility during which she was liable to the most extraordinary attacks of catalepsy and would lie with her eyes open and staring, sometimes in the attitude in which the fit seized her. She had even attacks of tetanus, and sometimes well defined characteristic attacks of hydrophobia. Not only may the sight or sound of water or a glass or a cup rouse her to frenzy, but she barks like a dog, a melancholy bark, or howls as dogs do at the sound of an organ. Her feet feel as if they were made of cotton. This weakness became paralysis. Her feet could be bent under her, twisted around, and she felt nothing. The limbs were there, but they seemed to have no blood, no flesh, no bones. This condition,

which is unlike any recognized disease, attacked her arms and hands. It was supposed to be connected with her spine. She cannot move without dislocating her hips, shoulders, or wrists. The catalepsy suggested the application of mesmerism. Then her mind became subject to every marvel of somnambulism, as her body was to every form of disease. Even in her mesmeric sleep she has never been able to reveal the cause of her sufferings. She could not see it, and the methods of treatment suggested by her under these conditions, though carefully followed, have had no good results. For instance, she said she must be wrapped in a freshly killed pig; then she was to have points of highly magnetized red-hot iron applied to her legs; to have melted sealing-wax on her spine. Her teeth fell out, she became deaf and then dumb, and suddenly after six months of perfect deafness and silence she recovered her hearing and speech. She occasionally recovers the use of her hands as unexpectedly as she loses it, but for seven years has never caught the use of her feet."

The physicians of the "*Comedie Humaine*," Bianchon and the rest, are unable to diagnose the case. Her father has recourse to a Polish charlatan, whom Balzac thus describes: "Halpersohn, who for five or six years was regarded as a charlatan, with his powders and mixtures, had the innate instinct of a great healer. Not only was he learned; he had observed with great care and had traveled all over Germany, Russia and Turkey, where he picked up much traditional lore. As he was learned in chemistry, he became a living encyclopedia of the secrets preserved by the 'good women,' as they were called, the midwives and the 'wise women' of every country where he had followed his father, a wandering trader. He has a little bag which he soaks in water till it is faintly colored, and certain fevers yield to this infusion taken by the patient. The virtues residing in plants are infinitely various according to him, and the most terrible maladies admit of cure. Halpersohn admires homeopathy less for its system than for its therapeutics. He keeps his hand dark, though it was full of discoveries; he would

have no pupils."

The retrocessive theories of this charlatan are similar to those of the rural charlatan who said he could not cure the patient, but could throw him into fits, and he was death on fits. According to Halpersohn, Miss Bernard has "a vicious humor, a national disorder in her blood, and it must be brought out. For seventeen years she has been suffering from the disease known as *plica polonica*, which can produce all these torments." Halpersohn has seen the most dreadful cases, and "is the only man living to bring out the *plica* in such a form as to be cruable, for not every one gets over it."

"Cure of the retrocession" (obviously a phase of medicine whence Hahnemann derived his "psoric" doctrine) has results like "cures" from Eddyism, Spiritualism, Lourdes, Relics, "New Thought," Perkemanism, Chiropractice, Osteopathy, Spondylotherapy, etc. Autointoxication like other phases of nutritive strain at periods of stress has played many parts in literature. One celebrated case is that of the Nicolae-Goethe controversy imbedded in the Walpurgusnacht of Faust²⁹. Faust's friend, Jerusalem the prototype of Werther³⁰, was a victim of adolescent melancholia attended with religious and morbid consciousness of adolescence. The acme of his despair was reached when he fell in love with Frau Herdt, the wife of the Elector Palatine's ambassador. He borrowed a pair of pistols on pretense of a journey and shot himself.

Jerusalem's "Philosophical Essays" were thought to be of great value by Lessing who had them published. Jerusalem's suicide led to the widely criticised and praised "Sorrows of Young Werther." This is said to have increased romantic suicides in Germany, although it is far more probable it simply caused explanations of, not the suicides themselves. Such suicides are an old story, only new because of fresh explanations. Christoph Frederick Nicolai³¹, a German author and publisher, had been the victim of hallucinations from which he recovered under venesection supplemented by climeination, exercise and diet. He "was a leading representative of the 18th

century rationalism" but Paul Carus and Carlyle claim "was narrow in his views, his prosaic nature had no tolerance for religious mysticism or poetic enthusiasm." He didn't even understand the psychic aspect of Werther's sentimentalism and charged Werther's state to autoxaemia. He therefore parodied "the Sorrows" in the "Joys of Young Werther" which lead to Thackeray's parody. Goethe wrote "At Werther's Grave" as an answer to "the Joys." Hern, a visitor to the grave, declares Werther would still be alive had he enjoyed a good digestion. Nicolai, however, through his own trying experience was more nearly in the right than Goethe and his modern upholders. Jerusalem was clearly suffering from adolescent stress; on this dietetics and elimination have a good effect. Byron's³² results from epsom salts, diet and exercise show this.

The state to which he thus brought himself was attended with the pleasurable sensation of intoxication and indeed differed from vinous exhilaration in being followed by no serious depression. "A dose of salts," Byron remarks in one of his journals, "has the effect of a temporary inebriation like light champagne upon me." Wine made him gloomy and savage as soon as the momentary exhilaration had passed; the irritation of the medicine affected his brain as alcohol affects men whose nerves suffer no painful consequence from it. And to the last, starvation and medicine operated in the same way on his mental forces. "By starving his body," says Trelawney, speaking from his observation of the poet in his closing years, "Byron kept his brain clear; no man had brighter eyes or a clearer voice."

The sacrifices which Byron thus made for the quickness of brain and freedom from bodily grossness were too heavy and grievous to be made daily throughout successive years, without reluctance and with no occasional relaxation of the stern discipline. But as soon as he wavered in his ascetic course so far as to eat and drink like other men he began to fatten and, in his early manhood, wax dull; and it was only by returning to the severe regimen

that he could recover his vigor and intellectual brightness. What it cost him in discomfort and effort thus to "clap the muzzle on his jaws" (to use his own words,) and like the hibernating animals consume his own fat, he alone knew. He spent the greater part of his manly time under the pangs of keen hunger, living for days together on a biscuit and soda water till, overcome by gnawing famine he would swallow a huge mess of potatoes, rice and fish drenched with vinegar and after recovering from the indigestion occasioned by such fare, would go in for another term of qualified starvation. This eliminated diet and exercise struck at auto-intoxication and sub-oxidation. It acted on Byron during adolescence precisely as it acts in early life. In early life, as Havelock Ellis remarks,³³ the emotions caused by forced repression of the excretions are frequently massive and acute in the highest degree and the joy of relief is correspondingly great. But in adult life, on most occasions, these desires can be largely pushed into the background of consciousness, partly by training, partly by the fact that involuntary muscular activity is less imperative in adult life so that the ideal element in connection with the ordinary excretions is almost a negligible quantity. Many attacks of brief melancholia and apathy may be removed by a saline purgative. The mental relief being so intense as to seem like a mental stimulation. Byron undoubtedly carried this regimen to its utmost limit since he based it rather on pugilistic notions of training than on medical notions of hygiene. In all probability even with this excess, it arrested what might have proven the complete breakdown, mentally, of hebephrenia. In removing obesity it undoubtedly improved Byron's suspicious tendencies and favorably affected the morbid introspection which is such a poison, mentally speaking, to adolescence. The pugilistic exercise also greatly aided the effects of the regimen.

For the sacrifices which he made for the attainment of his object, Byron was repaid nobly. He submitted to starvation and physic, in order to escape loathsome un-

sightliness; and besides relieving him of the repulsive aspect, the regimen to his astonishment and delight—endowed him with the beauty of loveliness—beauty that became proverbial. No longer big and puffy, his eyelids and cheeks became fine and firm and delicate with curves as clear in outline as the curves of sculpture. Ceasing to be thick and heavy, his lips and chin assumed the peculiar sweetness and softness that made him in the lower part of his countenance a bewitchingly charming woman rather than a handsome man. The nose, even in his comeliest period sometimes too broad and having (as Leigh Hunt spitefully remarked) the appearance of having been put on the face instead of coming out from it, was relieved of its clumsiness and refined into harmony with the rest of a profile singularly suggestive of high breeding. At the same time the blue-gray eyes, fringed with dark (almost black) lashes, acquired a brightness and subtlety of expression that had never before distinguished them. His complexion was purified to transparency and his auburn hair, playing over his brow in short feathery curls, became richly lustrous.

But for his marriage with the daughter of a hysteric squirearch the errors and miseries of Byron's later life would not have happened.

Byron, according to a prevalent opinion accepted by Haydon³² had a morbid aversion to see women eat, which aversion, as Noel³⁵ points out, has a simple explanation: At the time of marriage (a fact well known to Lady Byron) Byron was dieting. Necessarily irritated by seeing enjoyment of the pleasures of the table while his appetite must be resisted, it was difficult to assume to like what he disliked. Byron could not pretend to enjoy dinner and chat with his wife while longing for the meal's end. After the honeymoon Lady Byron generally breakfasted, lunched and dined alone, or had the solitude of her meals briefly broken by her husband. Another source of Byron's irritability toward his wife arose from his not unnatural dislike to be interrupted when writing. Lady Byron practiced interrupt-

ing him because she thought his dislike to interruption a mere whim. A business man would be extremely irritated by unnecessary interruption during correspondence, furthermore, such frivolous interruptions were obviously fatal to good literary work.

Lady Byron was the daughter of a hysteric intriguing mother of the county family village gossip type. Regarding her daughter as a paragon she spoilt her. The daughter was of that auto-erotic type which puts meretricious constructions on the most innocent actions of friends, which makes self-indulgence an art, is indolent, elfish, and "religious." She was attractive looking, ostentatiously philanthropic, clever, stiff, prim, formal, very priggish and pruriently prudish. Naturally therefore she was much influenced by her toady governess, Mrs. Clermont. The latter having been a successful governess in those snobocrat days was a skilled toady. Miss Milbanke during Byron's courtship had been so jealous of Lady Caroline Lamb as to satirize her in verse. Once she kindly told Lady Caroline that her affectation of a weebegone Byronic visage marred the effect of her "fair seeming foolishness." She thus so played the arts of the Minervan "coquette" as to outdo the impulsive Lady Caroline in Byron's esteem. The most skilled matrimonial intrigant could not better have posed at another woman's expense than did this "unsophisticated virgin" of the Beecher-Stowe³⁵ myth. During the early months of marriage Lady Byron nagged Byron eternally, stimulated by her mother (whose conduct showed there were justifications for the pre-historic taboo³⁶ which kept the mother-in-law out of the son-in-law's way on pain of death³⁷) and the mischief making Mrs. Clermont. Even on a healthy man such nagging might have the disastrous effects which Shakespeare paints in the "Comedy of Errors."

ADR. "It was the copy of our conference:
In bed he slept, not for my urging it;
At board he fed, not for my urging it;
Alone it was the subject of my theme;

In company I often glanced it;
Still did I tell him it was vile and bad.

ABB. And therefore came it that the man was mad:
The venom clamours of a jealous woman
Poison more deadly than a mad dog's tooth.
It seems his sleep were hindered by thy railing
And therefore comes it that his head is light,
Thou say'st his meat was sauced with thy upbraidings:
Unquiet meals make ill digestions;
Thereof the raging fire of fever bred;
And what's a fever but a fit of madness.
Thou say'st his sports were hinder'd by thy brawls:
Sweet recreation barr'd, what doth ensue
But moody and dull melancholy,
Kinsman to grim and comfortless despair
And at her heels a huge infectious troop
Of pure distemperatures and foes to life?
In food, in sport and life-preserving rest
To be disturb'd would mad, or man or beast
The consequence is then by jealous fits
Have scared thy husband from the use of wits.

There was therefore good reasons for the depression seemingly amounting to melancholia but due to adequate external causes which even Byron's sister noticed in him at that time. Urged on by the prying curiosity of Lady Milbanke, Mrs. Clermont did not hesitate to pick locks and search private memoranda in order to pander to Lady Byron's worst qualities who like most frigid hysterics had an ability of assuming "confidential relations with inviolable secrecy" to secure power and adherents. By the flattery implied in such confidential relationships, hysterics captivate self-admirers, especially those who, drenched with philistinism conceive themselves thereby endowed with opinions which must be "common sense." Lady Byron for years thus captivated poscurs of the "social purity" pervert type, of the "superior" woman type, of the type which canted then about the inherent depravity of American institutions as it now cants about inherent depravity of nonalcoholophobia. No ostentatious charity

or pseudo-reform failed of blatant support by Lady Byron as thereby were sycophants secured at slight cost. From her sedulous patronage of that modern notoriety dodge the "Charity" Ball, came Byron's bitter lined:

"What matter the pangs of a husband and father,
 If his sorrows in exile be great or be small,
 So the Pharisee's glories around her she gather,
 And the saint patronizes her charity ball.
 What matters—a heart, which, though, faulty, has
 feeling,
 Be driven to excesses which once could appall
 That the sinner should suffer is only fair dealing
 As the saint keeps her charity back for the ball."

(TO BE CONTINUED.)

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 4. Journal de Med. de Paris, 1893.
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 6. Introduction to Madame Bovary, (American Trans.)
 7. Julius Caesar.
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 13. Alienist and Neurologist, Nov., 1910.
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 29. Bayard Taylor's Translation.
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SELECTIONS

THE LANCET, 1900, 1, 1, 1

CLINICAL NEUROLOGY

THE PITUITARY BODY.—“The discovery by Marie that an intimate relationship exists between the pituitary body and acromegaly created a new interest in a body which previously had been of interest purely on account of its anatomic relations and its histologic structure. About a decade later Oliver and Schafer found that extracts made from the entire pituitary body produced a rise in blood-pressure when given intravenously. By working with extracts made from its various parts, Howell concluded that the pressor effect was produced only by posterior lobe extracts. Later it was found by others that posterior lobe extracts caused diuresis, dilatation of the pupil, and increase in the secretion of milk and the contraction of unstriated muscle, especially that of the arteries, uterus, intestines and bladder.

“The evidence that the pituitary body is essential to life is now convincing. Paulesco and Cushing, using an improved technic, showed that fatal results are to be expected from removal of the anterior lobe. Partial removal of the anterior lobe led to striking changes in metabolism.—Editorial Jour. A. M. A.

CLINICAL PSYCHIATRY

INSANITY IN RELATION TO SEX AND AGE.—The Virginia Medical Semi-monthly notes from the report on the

insane in the United States prepared by Dr. Joseph A. Hill and issued by Director of the Census that there is more insanity among men than women, as based upon data received from hospitals and asylums for the insane for 1910. In 1880, the two sexes had nearly an equal representation in these institutions, but on January 1, 1910, there were 98,695 males, as compared with 80,096 females in institutions for the insane. Nearly 25 per cent. of the males in the hospitals in 1910 were admitted for alcoholic psychosis or general paralysis, resulting from vice and dissipation. These causes being eliminated, the disparity in numbers of admissions between the sexes practically disappears. While the largest percentage of admissions is between the ages of 25 and 50 years, in proportion to the number of people in the same period of life, the number of admissions is larger in old age than in middle life and in middle life than in youth.

NEUROTOXICOLOGY

"THE TELEPHONE IN MEDICAL PRACTICE."—From The Hospital, London, 2/13/15 we extract the following: "A medical practitioner ordered the preparation of a solution of eserine sulphate, and sent the directions by telephone. The dispenser, mistaking the figures, made the solution much stronger than the doctor had intended, with the result that the administration of the medicine to the patient was followed promptly by a fatal result. In this individual instance there was some mitigation of the position in the fact that the patient was the subject of a malignant growth, and was therefore beyond the reach of hope. * * * The brief fact is that a poisonous dose of medicine was administered because the directions for the compounding of the medicine were conveyed through the telephone. The moral is obvious. * * * The only safe rule, and it ought to be enforced in

all hospitals and nursing institutions, is that the prescribing should be by written directions, and that for such purposes the telephone should be forbidden."

Many pertinent and valuable editorial suggestions follow for which we have not space. The entire editorial of one and a quarter pages is well worth reading by every physician. The editor knows what he is talking about from the standpoint of medical experience. The telephone has its perils in medical practice as well as its benefits and annoyances.

NEUROPATHOLOGY

THE CAUSE AND CONTROL OF CANCER.—The 1914 report of the Missouri State Board of Health gives us the following: "In one sense we do not know the 'cause of cancer, since we have not learned what induces the changes in the character and behavior of the beginning of its rebellious and destructive career. But in another sense, we have much empirical knowledge as to the 'causes' of cancer, that is we know from long recorded observation in many countries many of the conditions under which the disease develops. Foremost in this department of our knowledge is the fact that continued irritation in a given spot is frequently followed by the disease. The examples are familiar to all who have read even the simplest accounts of the disease. Chimney sweeps develop cancer of the skin from irritation by the soot. Workers in tar distilleries, in the manufacture of grease or briquettes also seem specially subject to skin cancer. Something in tar and pitch under such continued exposure develops warts which break down and become cancers. Men employed in dye works have been observed to suffer from cancer of the bladder. Cancer of the tongue from irritation by the pipe or cigar is commonly reported. Even long continued irritation is not always

necessary and cases are recorded where cancer seems clearly to have developed after a single blow or wound or fracture of some bone.

THE CONTROL OF CANCER.

While these interesting and often curious observations have not yet led us appreciably nearer to that absolute understanding of the disease which is here, as always, the aim of science, yet they furnish us with valuable practical guidance in the recognition of cancer in its early stages and give the chief hope at present of its better control. For we see in all these recorded cases, the prime fact that cancer is at first a local disease. If it cannot be cured it can be removed. Competent surgery in the early stages means a large percentage of cures, and the earlier the better. Hope lies chiefly in the first operation. Delay means not simply danger but, as a rule, inevitable death. Many surgeons believe that all cancers develop from some "precancerous lesion," such as a wart or mole or scratch that does not heal. If others dispute these statements as too sweeping, there is nevertheless absolute agreement as to the necessity of early recognition of the disease and prompt treatment if the death rate is to be reduced. But what are the facts and the knowledge and habits of people in this respect as we find them?

NEUROTHERAPY

CONCERNING GASTRO-INTESTINAL ANTISEPSIS.—Intestinal antiseptics, it is believed, say Parke, Davis & Co., do not cleanse the digestive tract of objectional bacteria and poisonous substances resulting from their growth, nor is purgative medication effective. But the bacillus bulgaricus, administered in the form of tablets, is said, on the other hand, to be notably efficacious in such conditions. It is asserted that these lactic-acid-producing bacilli, thus administered, survive for a long time in the

intestine, multiplying and producing quantities of lactic acid, obstructing the growth of harmful micro-organisms and preventing disease. And they are offering to the profession tablets of *bacillus bulgaricus*, claiming that they give good results in the vomiting and diarrheas of infants, in diseases due to intestinal autointoxication, and in glycosuria and diabetes.

THE VITAMINE DIETARY OF STASSANO.—The following articles of diet which are rich in vitamins, have been found to be of curative as well as of prophylactic value: human milk, fresh cow's milk, butter, cheese, yolk of egg, beef juice, fresh tomatoes, fresh legumes and soups containing them, fresh fruits or their juices, the sauce of stewed fruits, whole corn or wheat bread, unpolished rice, slightly roasted beef, fresh yeast, extracts and preparations of yeast, and codliver oil.

THE FATIGUE TOXIN AND IMMUNITY.—New York Med. Record.—Ranke was the first to show that the aqueous extract of a fatigued frog's muscle when made to perfuse the muscle of another frog evokes in this muscle all the phenomena of fatigue. Weichardt isolated the co-called fatigue-toxin, ponogen, or kinotoxin, and reported later the production of a fatigue antitoxin capable of neutralizing the physical evidences of fatigue. Many investigators have studied the relation between fatigue and disease. In 1909 Scalfati reported that the fatigued organism provides a favorable culture medium for the typhoid bacillus, and one year later De Sandro demonstrated in fatigued animals a diminution in the phagocytic and chemotactic powers of the blood-cells. Vincenzo Palmulli (*Riforma Medica*, October 31, 1914) details the important results of his experiments showing the role played by the fatigue toxin in the process of immunity. He found that in dogs the intravenous injection of this substance causes a reduction in the immune power of their blood serum. The reduction consists in lowering in the agglutinating, bacteriolytic, phagocytic, and opsonic powers of the blood. It would appear, therefore, as if

during fatigue there is an inhibition in the production of agglutinins, opsonins, bacteriolysins, etc. This fact fits in closely with the observations made by Marfan, Jaccaud and others, that physical fatigue predisposes to bacterial infection.

LOOKING BACKWARD ON SCOPOLAMINE ANAESTHESIA.—In a paper in 1905 read before the Medical Society of the State of Pennsylvania Dr. John V. Shoemaker (since deceased) calls attention to the danger attending its use in large doses. The drug is said to be identical with hyoscine, and the commercial article contains an admixture of "atropine" which is isometric with hyoscine or scopolamine. This latter fact may explain variations in the action of the commercial scopolamine hydrobromide, depending upon the quantity of atropine present.

"As a mydriatic scopolamine resembles atropine, but upon the circulatory and nervous systems its effects are quite different. 'Scopolamine does not affect the respiration, except in large doses, which produce the Cheyne-Stokes type. Small doses slightly increase the blood pressure, but large doses decrease it. The heart's action is made slower, owing to a sedative action upon the cardio-motor apparatus. Cerebral activity is diminished and the electrical excitability of the brain is reduced. Narcosis and coma are produced by full doses. Motor reflex paralysis indicates a marked depression of the spinal cord, and there is consequent profound relaxation of the voluntary muscular system.' Two drops of a 1% sol. instilled for mydriasis into the eyes of an adult produced complete muscular relaxation and loss of consciousness which lasted for four hours. This was followed by delirium lasting two hours, and then sleep for an hour and a half. There were no subsequent ill effects. It is contraindicated in the young and the old,—in nephritis, scarlatina and diphtheria, and heart disease. The antidotes are 'the diffusible stimulants, as nitroglycerine, strychnine and caffeine, artificial respiration, the administration of oxygen by inhalation, hot external applications,

friction of the skin, and electricity.' Morphine is synergistic. Karff recommends giving scopolamine gr. 1-640 and morphine gr. 2/5 in three doses, the first to be given 2½ hours, the second 1½ hours, and the third ½ hour before the operation. When used preliminary to chloroform or ether it reduces the excitement accompanying the administration of these drugs, and lessens the tendency to vomit. Dr. Shoemaker justly remarks that there is no such thing as a perfectly safe anaesthetic, and warns against the large doses used in this country, where surgeons give scopolamine gr. 1/64 with morphine gr. 1/6 at intervals of an hour. In view of the uncertain composition of the commercial drug, and personal idiosyncrasy, such doses may be very dangerous."

It is a wise precaution to be cautious with these drugs in the light of even later revelations. The Medical World concludes an editorial on the subject as follows:

"In the 1,500 cases of anesthesia reported there have been fourteen deaths. Since the only claim which scopolamine has upon the attention of the medical profession is the purpose of avoiding the known dangers of general anesthesia by the old methods, its claim must be considered as far from being proven. Fourteen deaths are sufficient warning that scopolamine is either not yet sufficiently understood, or that it should not be used if any other anesthetic is available. The problem has incited enough interest and experimentation to admit of the promise of a speedy elucidation. As soon as there is sufficient data to admit of definite conclusions, we will note the fact in our columns; meanwhile, we advise that the general practitioner let scopolamine anesthesia severely alone."

NUTRITIONAL THERAPY.—From this point of view the New York Medical excerpts from the Berlin Clinical Wochn. for February the following valuable matter under the following caption:

"**THE POTATO AS A UNIVERSAL ALIMENT.**—Richter states that a universal food substance is one which is

necessary to the life of a community, is within the reach of the smallest purse and is palatable either *per se* or through various forms of cookery. The great monotony of the menu in the poorest strata of society undoubtedly leads to the use of alcohol. A universal foodstuff must of course be one which is readily obtainable, and therefore one which can be readily stored in sufficient quantities. It must be grown on home soil and in quantities so large that imports become unnecessary. Does the potato fill all these requirements? This tuber originated in South America and about 1560 it was introduced by way of Spain to Italy and Burgundy, reaching England in 1584, encountering strong opposition. It was first grown in Austria in 1686 and in Saxony 1705, and strong prejudices had to be overcome before it became an article of diet; and perhaps only famine was responsible for its free consumption. In France it was unknown before the Revolution. The prejudice was due in part to confusion of the tuber with the fruit, the latter being unfit for consumption. At present the German acreage exceeds that of every other country, 12.6 per cent. of arable land being given up to the potato or over five times the acreage of England. The tonnage of the potato crop has increased enormously in late years. An acre of potatoes contains more nutriment than an acre of vegetables or cereals. In addition to an enormous human consumption potatoes are used very largely for fodder, and for making spirits. The per capita consumption of potatoes of human beings is about 400 lbs. per annum, but the amount used for fodder exceeds considerably that used for human food, while half as much is used for distilling as for feeding the people. By cutting down the fodder or spirit production, or both, the public can benefit by large reserves of food. The potato is far from being an ideal food in itself, for it is almost fat free, and its protein content is small, although quite utilizable. The tuber loses nearly a fourth of its nutriment by peeling. To depend upon the potato for all the protein requirement an Irish day-laborer

finds it necessary to eat about 13 pounds a day, and the same ration obtains among the peasants in parts of Silesia and Bavaria. However, under the more recent teachings concerning the sufficiency of low-protein diet such amounts may be far too large. In other words, from half to two-thirds the amount of potatoes mentioned above may furnish the protein requirement of subjects engaged in moderate activities, while at rest a much less amount will sustain life and even give a surplus of stored N. This laboratory find does not quite agree with clinical experience, however, for a potato diet is used to some extent successfully for the reduction of weight. When eaten as usual with butter loss of weight does not occur. Those who have used the potato diet in practice further state that if more than five pounds daily are consumed beyond an interval of several weeks, symptoms of intestinal insufficiency develop. Those who are forced to eat these large amounts as sole aliment develop the well-known "potato belly" of the very poor man. From all that has been said, therefore, the potato will serve admirably as a leading constituent of diet. The theoretically advised eating of the skins is met by the objection that the latter cover up decayed regions and that only after peeling can these be detected and removed. Potato porridge, mashed potato, etc., form the best utilizable methods of preparation. Dried potatoes have never made good as a food product."

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Any comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or "mouths of wisest censure."

NOTICE TO NEWS AGENTS

This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffs are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

CONCERNING RENEWALS OF SUBSCRIPTIONS

This magazine would be much indebted to its regular subscribers and advertisers if they would renew by direct communication with this office, especially in the United States, and not through news agents.

CHAS. H. HUGHES, M. D., Editor and Publisher.

H. L. HUGHES, MANAGER.

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EDITORIAL

A MILITARY SCHOOL SOLD TO OSTEOPATHS.—The Bleece Institute property at Macon, Mo., valued at \$75,000 has been purchased by the Still Brothers and other citizens of Macon to become the Osteopathic Sanitarium Company and the Osteopathic School interests will be located there, of which the elder Still was the founder.

The multiplication of irregular medical short term teaching schools suggests the wisdom of not too greatly lengthening the term and conditions of acquiring the essentials of a regular scientific medical education.

Ambitious young men or women of limited means and with the necessity upon them of beginning early in life to get a livelihood through medical practice, can not,

as a rule, well wait five or six years after their preliminary education before being ready to practice.

Conditions would seem to suggest the blending of literary and scientific medical education in one institution of instruction. Latin and Greek philology by natural methods and the essentials of chemistry should be taught, as well as microscopy, serum therapy and pathology should be imparted in a medical university giving a blended degree of B.S., B.L. and M.D., etc.

This suggestion is merely thrown out to the Council on Medical Education. At this time of great medical advance and great multitude of matter to be imparted to medical students it is essential to efficiency in practice that a wise medical pedagogy should be sought by the medical profession.

THE NEXT (SEVENTY-FIRST) ANNUAL MEETING of the American Medico-Psychological Association will be May 11th to 14th, 1915, at The Hotel Chamberlin, Fortress Monroe, Va.

AN ALIENIST AND NEUROLOGIST SUBSCRIBER ELECTED GOVERNOR.—W. N. Ferris of the Ferris Institute of Big Rapids, Michigan, a subscriber to the *Alienist and Neurologist* has been elected Governor of the State of Michigan. Note what becomes of our subscribers.

We should not be surprised to hear next of others elected to the Governorships of other States and maybe President, in case his excellency, President Wilson does not get matters straightened out in Mexico.

To be a reader of the *Alienist and Neurologist* is no disparagement to any gubernatorial or presidential aspirant.

Subscribe for the *Alienist and Neurologist*, aim for the Presidency even if you only fall into the national cabinet or become a lieutenant governor.

THE NATIONAL COMMITTEE FOR MENTAL HYGIENE is a salutary and hopeful movement for the welfare of our

race and country. Though its inception is tardy it is gratifying to see the movement so vigorously started and under such promising auspices as was shown at last February meeting.

Mrs. William K. Vanderbilt has contributed \$44,500 and Mrs. Elizabeth Milbank Anderson \$40,000, to be used in the extension of its work. Dr. Thomas W. Salmon, New York, of the Rockefeller Foundation. State societies for mental hygiene throughout the country are to be organized. A quarterly magazine for the prevention of insanity and the care and treatment of the insane, the feeble-minded and alcohol and drug victims, will be published. The officers for the ensuing year are: President, Dr. Lewellys F. Barker; Baltimore; Vice-Presidents, Dr. Charles W. Eliot, Boston, and Dr. William H. Welch, Baltimore; Treasurer, Otto T. Bannard; Medical Director, Dr. Thomas W. Salmon, New York; and Secretary, Clifford W. Beers.

THE PAN-AMERICAN MEDICAL CONGRESS under the Presidency of Dr. Charles A. L. Reed, which meets at San Francisco, Calif., June 17th, promises to be an instructive and pleasant reunion of the physicians of all of the Americas. It should be well attended from our United States. It will be good for the brethren of the profession to get together there.

STATE PSYCHOLOGIST FOR ILLINOIS.—Dr. George Ordahl, of the Minnesota State School for Feeble-Minded, has been selected State Psychologist of Illinois and has commenced his work at the Lincoln State School and Colony of whose staff he will be a member.

Dr. Ordahl comes to Illinois with the best of recommendations from men high in the study and work among the feeble-minded. Dr. A. C. Rogers, the progressive superintendent of the Faribault school, gave him unqualified praise.

Mrs. Ordahl, who has worked with her husband in many studies, will continue her work in this State.

Eight years ago when it was proposed to add a psychologist to the staff of the Lincoln State School, the idea was not received enthusiastically. The position was looked upon as one of the modern fads. It required several years of agitation before the authorities finally concluded to give the idea a trial.

THE OBJECT OF THE VISITING NURSE ASSOCIATION of St. Louis, (Central Office, Vanol Building, Vandeventer and Olive Street, Lindell 1340, Delmar 1102) is to provide graduate, registered nurses to visit those otherwise unable to secure skilled assistance in time of illness, to teach cleanliness and the proper care of the sick, and to prevent the spread of disease.

The aim of this commendable organization is chiefly to assist indigent people and those in moderate circumstances. Others will be expected to pay \$1.00 an hour. Mrs. John B. Shapleigh, President, 4950 Berlin Avenue; Margaret M. McClure, R. N. Superintendent of Nurses.

PROFESSOR JOHNSON'S TUBERCULO-PHOBIC SUSPENDER INVESTMENT.—Professor John B. Johnson, eminent in his day as lecturer on physical diagnosis and diseases of the thoracic cavity in St. Louis Medical College, now a department of the Washington University, St. Louis, who in his enthusiastic student days was a pupil of the renowned Henry I. Bowditch of Boston, became so hypochondrically convinced that he had incipient tuberculosis that on purchasing a pair of suspenders, he selected the cheapest fifty cent pair placed before him, out of a lot running up to dollars in price, because he was impressed that he would not live to wear out a costlier pair. Prof. Johnson related this story of himself to the class when Dr. C. H. Hughes was a medical student in 1859. Prof. Johnson lived to old age and grew extremely stout notwithstanding.

Earnest students are prone to this sort of lecture hypochondria. Dr. Johnson's (like Dr. Bowditch's) lectures were very impressive on physical diagnosis.

The editor of this magazine confesses to having had a similar phthisophobia in his student days, though he has survived the fear a great many years.

THE AMERICAN ACADEMY OF MEDICINE has specialized in medical sociology for the last eight years. The work done has been of the greatest importance. The publications of the Academy have won a high place and are in constant demand. The revised Constitution and By-Laws make it possible to so extend its membership as to include as Fellows all physicians who are interested in this phase of medicine, and, in Associate membership, all workers in the field of sociology who recognize that scientific medicine is fundamental to all inquiries and investigations of abnormal social conditions, and that the co-operation of the physician is essential for the successful administration of measures for the correction of conditions which interfere with human efficiency.

We agree with this society that the field of sociologic medicine is so large that it can only be satisfactorily covered by a national society of the broadest scope such as this organization is, and with the widest conception of the nature of the work before it. We believe that the American Academy of Medicine is the legitimate one to expand into such an organization.

The good work up to date justifies the scope of its work for the present and coming years as announced, viz.:

"The child and its relationship to society. The medical aspects of education. The social inefficient. Legislation and medicine. Medicine in its relationships to industry, trade and commerce. Civilization in its effects on morbidity and mortality."

MEDICAL OFFICERS OF HOSPITALS FOR THE INSANE should make their visiting rounds of the halls at different hours of different days and at different entrances, so that they may know from personal observation how their patients are being treated.

All of these hospitals should have inspecting head attendants of undoubted integrity, fidelity and kindness of heart toward the patients, to detect any possible mistreatment of the helpless patients.

As a rule kind treatment prevails in these institutions but every now and then some brutal conceited inhuman "smart Alex," who thinks he knows better how the insane ought to be managed than the humane rules and regulations enjoin, gets into the hospital as a nurse or attendant and shows his vicious, cruel, conceited, inhuman, domineering nature, by clandestinely punishing a patient (even unto death sometimes) for the patient's delusional attempt at violence or stupid insane resistance of the nurse's orders. Such violent-minded nurses ought to be subjected to the severest punishment, even to the penitentiary or electrocution, where death results from the attendant's violence. An insane hospital is no place for the display of vicious passion or prowess toward the so-called unruly insane.

It is the part of the profession of nursing the insane to be imperturbable under insane insult or violence and summon other nursing aid to quietly handle excited patients. But ignorant and vicious attendants prefer to handle excited patients alone and unaided and sometimes the death of the patient results. Continual surveillance brings safety.

THE PSYCHIATRY OF FLOWERS IN THE SICK ROOM.—The observant editor of the Indianapolis Medical Journal notes the salutary "influence of flowers in lightening suffering and their employment in cases of sickness" and contributes an interestingly therapeutic editorial thereon, all of which he who ministers to minds diseased and knows the power of psychic pleasure to exalt organic resistive power in combat against disease, every psychiatrist approves, from his special experience. Alienists in charge of the hospital for the insane know well the value of agreeable, pleasing appeals to the senses of sight and smell of flowers and similar impressions of the other

senses, as of music, pictures, palatable diet and agreeable environments of every sort. Flowers have charms as well as music, etc. for the insane, and general hospitals might therapeutically and profitably adorn their walls as the walls of the insane hospitals are. Surgeons should pleasingly decorate their reception and operating rooms.

DR. G. W. MORROW has been appointed first assistant superintendent of the Anna State Hospital, Ills. to succeed Dr. W. W. Mercer, resigned.

THE DUAL SOURCE OF THE CEREBROSPINAL FLUID is in the choroid plexus and the cerebral capillaries, according to Dandy and Blackfan, Frazier, Peet and Cushing.

INTERNAL HYDROCEPHALUS was produced by Frazier and Peet by blocking the Sylvius aqueduct. For elaboration see Journal American Medical Association, Dec. 1914, p. 2232. It may also be a cerebral perivascular space sheath excretion—the internal nutrient both of the arteries and cord and the external bath of the nerves.

THE SUSPENSION OF GAZETTA MEDICA ITALIANA is noted at the office of this magazine with regret.

THE EMINENT ALIENIST, MARAGLIANO, is to be justly memorialized by a suitable tablet to his honored memory in the Asylum over which he so worthily presided in Italy.

ROLAND B. MOLINEUX IS VIOLENTLY INSANE.—Babylon, N. Y., Sept. 7—Roland B. Molineux, twice tried for the murder of Mrs. Katherine L. Adams in 1902 and acquitted on the second trial, was adjudged insane today by two physicians sitting as a board in lunacy, and formally committed, as a violent patient, to the King's Park Asylum.

PROSPEROUS GRINNELL COLLEGE, IOWA.—This flourish-

ing College has something to say concerning its interests in this issue:

"The foundations are in and one story about completed for a women's dormitory to cost about \$200,000, and to house some 300 young women. A dining room to seat 400, with a kitchen of modern hotel equipment, is part of the new dormitory.

"The alumni have plans under way to do something for the College in the way of a fine new building towards which they are arranging to contribute \$100,000.

"A tract of eighty acres lying north of the college grounds, and connecting with them, has been priced and will undoubtedly be added to the campus. The College is prospering."

Harvey Ingham in The Evening Tribune, Des Moines, Iowa, November 24, 1914, speaks some mighty good words for this pioneer educational institution of the great State of Iowa, from whom we have taken a part of this notice. This college is fast developing into the Yale and Harvard of the Central West.

DOCTOR CHARLES MCINTIRE'S CONTRIBUTION ON THE RIGIDITY OF THE MEDICAL CURRICULUM as an obstacle to the progress of medical education should be read, and the comments thereon of other eminent members of the Academy, by all well wishers of the profession and the people. Medicine needs the best minds in quality, essential acquisition and capacity possible to bring into its ranks.

It needs powerful, intelligent executive soldiers of science to battle with disease. It needs enlightened armamenture for fighting disease, real weapons of utility rather than literary embellishment and the best and most ready means of acquiring practical proficiency. It needs clinical skill based on knowledge of all of the allied sciences. It needs proficiency taught as briefly and completely as possible and adopted to the average student's limited time and means for study. Instruction should be condensed. Modern languages might be relegated

to the post-graduate period or to the interim of the college curriculum.

THE HARRISON OPIUM COCA BILL will contribute to prevent the indefinite blind prescribing of certain proprietaries, the ingredients and exact proportions of which are not definitely made known to the profession and which no accurate prescriber should write, to the business detriment of square dealing proprietary pharmacists who offer the medical profession good meritorious and true and useful productions, because the law and the physicians must correctly know the goods he is handling.

MANY INSANE HOSPITAL REPORTS come to us. We are glad to receive them and would be pleased to have their interesting medical features marked or better epitomized for medical notice. Physicians outside of these worthy institutions (public and private) should know more about their work and claims on professional and public philanthropic consideration. While it is true we have not space for noticing all in detail, we like to inform our readers what these worthy hospitals and sanitariums are doing and to make occasional note to promote their welfare and of their meritorious physicians and managers. If the inside of our insane hospitals were better known on the outside there would be a better appreciation of them than now exists in some not well informed quarters.

THE FIRST CASE OF OPIUM ABSTENTION SUICIDE under the Harrison Anti-Narcotic Law, occurred in St. Louis in April. Sudden deaths as well as suicides and insanity are frequent sequences of sudden deprivation of opium in the opium addict of long standing. The unfortunates are to be sympathized with, pitied, nurtured back to normal and not censoriously and brutally condemned as "drug fiends," for most of them have become unconsciously and not intentionally the pitiable, helpless habit victims they are. They are not "dope fiends" but victims of an opiated or cocaineized patent medicine or

doctor's prescription, too often and without medical judgment, repeated and too long continued.

THE BRITISH MEDICO-PSYCHOLOGICAL ASSOCIATION at its last May meeting had under "Consideration of a letter from the Board of Control which asked for suggestions as to the use of Government Grant toward scientific research in Psychiatry."

A very timely and pertinent question which we hope was answered in the interest of this important matter. At the same meeting "Some Observations on Early Nervous and Mental Cases, with suggestions as to possible improvement in our methods of dealing with them" was read by A. Helen Boyle, M.D.,L.R.C.P.

MARRIED SCHOOL TEACHERS SHOULD BE RETAINED IN SERVICE.—The Medical Times for last March had a commendable editorial on teacher mothers advocating their retention in school service.

We go further. Female teachers should be encouraged to marry and become mothers and rewarded when they do.

Women who marry and have children or have married and had children, and their affections cultivated toward children and their understanding concerning them, educated and interest in them increased and trained and improved, should be preferably sought after by school boards and more highly prized because of their wider life experience and consequently better qualified to "teach the young idea how to shoot."

They should even be pensioned or what is the same, their pay allowed to them, when out of school during certain weeks of unavoidable absence. There is good psychological reason for this in the better quality of child understanding and management which would accrue to pedagogy from the liberal treatment of mother teachers. Besides it would be only fair to the married female element of the teaching profession.

THE SEVENTH PAN-AMERICAN CONGRESS will meet in San Francisco, June 17th-21st inclusive. It assembles

pursuant to invitation of the President of the United States issued in accordance with an act of Congress, approved March 3, 1915.

The countries and colonies embraced in the Congress are the Argentine Republic, Bolivia, Brazil, Canada, Colombia, Cuba, Chile, Costa Rica, El Salvador, Ecuador, Guatamala, Honduras, Haiti, Hawaii, Mexico, Martinique, Nicaragua, Panama, Paraguay, Peru, Santo Domingo, United States, Uruguay, Venezuela, British Guiana, Dutch Guiana, French Guiana, Jamaica, Barbadoes, St. Thomas and St. Vincent. The organization of the Congress is perfected in these countries and the majority of them have signified their intention to be represented by duly accredited delegates.

The Palace Hotel will be headquarters.

The First Pan-American Medical Congress was most successfully held in the United States in 1893. Five intervening Congresses have been held in Latin American countries.

"THE PRACTICAL SIDE OF MASONIC WORK in Servia is well shown by the fact that the bodies there have established an orphanage with a capital of more than 500,000 francs, where they are caring for 2,600 orphans and training them so that they will be able to take up life's duties. They have also raised over 1,000,000 francs to establish schools and aid needy students; manual training is furnished for deaf mute children, and another enterprise provides meals for poor scholars."—The New Age.

Why has not the American public and medical press solicited aid for poor little Servia as it has for unfortunate and devastated Belgium? Why does Belgium get all foreign sympathy? This Magazine will receive, receipt for and transmit to the proper authorities contributions to either country. The sun of charitable giving should shine on all—Greek and Roman Catholic alike. "If mindless of home or creed over the suffering form hath bent, he who gives hath not lived in vain."

THE COUNCIL ON MEDICAL EDUCATION OF THE A. M. A. has done much to advance medical education in the United States. We think, however, it has done and is doing something against the native born American medical student in demanding the knowledge of two modern languages besides the knowledge of mother tongue, as prerequisite to graduation in the medical schools of this polyglot country.

The German, French, Italian, Russian born student, etc., thus has the advantage over the native American in usually having already acquired at least one of the required foreign languages and gets credit over the native born student and has more time (in all too limited) for the exacting course of medical application required by our colleges and which can not be dispensed with except the foreign languages.

Modern languages as a preliminary essential to graduation, though valuable, should not be exacted of medical students. A knowledge of philologic Greek and Latin might be briefly and incidentally learned to advantage by the medical student in vacation or very briefly taught in the college course. But the doctor should have all of his student years for pure medical study unless he should be required to study more than four years and more than four years taken for medical study before permitting final examination for the M.D. degree would be a wrong to the rightly inclined student and tend to foster and promote the multiplication of the pseudo-scientific sects—the osteopaths, chiropractics, etc., now multiplying over the land.

OBITUARY

THE NESTOR OF KENTUCKY MEDICINE, Doctor James Morrison Bodine, for many years Professor of Anatomy and Dean of the Medical Department of the University of Louisville, Ky., died January 25th, 1915, at the age of eighty-four years.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

NERVOUS AND MENTAL DISEASES.—By Archibald Church, M.D., Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago; and Frederick Peterson, M.D., formerly Professor of Psychiatry, Columbia University. Eighth edition, revised. Octavo volume of 940 pages, with 350 illustrations. Philadelphia and London; W. B. Saunders Company, 1914. Cloth, \$5.00 net; Half morocco, \$6.50 net.

The new edition of this meritorious book which we have hitherto unstintedly commended needs no further word from us except to say that it fully sustains the high reputation it has won as an up-to-date text book of the subjects of which it treats. The authors write by warrant of experience.

THE THEORY OF PSYCHOANALYSIS.—By Dr. C. G. Jung of Zurich, *Journal of Nervous and Mental Disease*, Series No. 19, New York. The Journal of Nervous and Mental Disease Publishing Company, 1915. In these lectures the author attempts to reconcile his practical experiences in psychoanalysis with the approaches to existing theories. His attitude towards those principles which his honored teacher, Sigmund Freud, has evolved from the experience of many decades. Since he has long been closely connected with psychoanalysis he thinks it will perhaps be asked with astonishment how it is that he is now for the first time defining his theoretical position. When, some ten years ago, it came home to him what a vast distance Freud had already travelled beyond the bounds of contemporary knowledge of psychopathological phenomena, especially the psychology of the complex mental process, he no longer felt himself in a position to exercise any real criticism. He did not

possess the sorry mandarin-courage of those people who—upon a basis of ignorance and incapacity—consider themselves justified in “critical” rejections. He thought one must first work modestly for years in such a field before he might dare to criticize. The evil results of premature and superficial criticism have certainly not been lacking. A preponderating number of critics have attacked with as much anger as ignorance. Psychoanalysis has flourished undisturbed and has not troubled itself one jot or tittle about the unscientific chatter that has buzzed around it.

With these views of the distinguished author we submit this up-to-date treatise on a subject just now enlisting much interest and some criticism in the ranks of clinical psychiatry. The subject is well and briefly handled covering only one hundred and thirty-three pages. Libido, the sexual theory and all the other aspects of this new and interesting theme of neural and psychoneural diagnosis are intelligently and critically discussed, together with their relations to certain classical psychoses and in such manner and with such candor as will not fail to interest and enlighten the thoughtful and truth-seeking alienist. We commend this valuable addition to present day psychiatric literature to our readers.

TRATTATO DI PSICHIATRIA ad uso dei medici e degli studenti del Prof. Leonardo Bianchi, Direttore della Clinica della Malattie Nervoce e Mentali della R. Università di Napoli.

Napoli Casa Editrice Cav. Dott. V. Pasquale. S. Andrea della Dame 17 p. p. Press of the Universal Clinic.

This is the second edition of this meritorious work embellished with numerous plates relating to the text.

From the borderland of war comes this illuminating treatise of psychiatry for the use of physicians and the instruction of students by the eminent corypheus in Italian psychiatry, Professor Leonardo Bianchi, Director of the Clinic of Nervous and Mental Diseases of the

University of Naples.

The text is admirable, the illustrations numerous and superb. One of the most novel of illustrations in clinical psychiatry is the *posa catatonica di dementi precepti*. This and the illustrations of the entire first chapter, particularly figure 2, showing the author's conception of the insula and operculo-fronto-parietal relations are especially entertaining.

The record and the history and photo of Carlo 1st should have a place in every hospital library. The author's chapters are all of supreme interest from the Italian view point and chapter XXXV on *Nevropatie e psiconervosi traumatiche*, will excite new interest in this debatable subject and turn the reader's mind to Charcot, Dupuy, Oppenheim, Erichsen, Page, Obersteiner and Beard.

The toxic insanities of cocaine, chloral, phycosileptica, coreica, nevrastronica, acute and tardy paranoia, frenosi, maniaco-depressiva mania, dementia paralytica, dementia senilis, have separate chapters and are well presented, especially the tremor and manuscript showing of paralytic dementia.

The pages of this magazine have borne testimony to the merits of many eminent Italian authorities in neurology and psychiatry and carried many valuable contributions from such eminent men of the author's nativity as Golgi, Maraglione, Tamburini, Sepille and others, but none has higher claim in psychiatry to the esteem of our readers, than Bianchi, the distinguished author of this meritorious book.

THE LAWS OF HEREDITY—THEIR DEFINITE MEANING AND INTERPRETATION.—The second of a series of monographs on the Improvement of the Human Plant. Henry Smith Williams, M.D., LL.D., Editor. Issued by the Luther Burbank Society, Santa Rosa, California.

An interesting study for the eugenicist, the alienist and the neurologist. The author in his foreword truly says:

"Heredity is more of a factor in human life than in plant life—more of a menace—more of a hope.

"And nothing in the world of living things responds so quickly to new environments as the human mind—child and adult.

"The great value of Luther Burbank's work lies in blazing the path of the application of the forces of heredity and environment to the improvement of the human plant—to the production of better races, better nations, better communities, better families, better individuals.

"Having completed the classification of Mr. Burbank's Records as applied to plant life, The Luther Burbank Society now proceeds to the larger task of interpreting the forces of heredity and environment toward the betterment of the human plant through a series of monographs now appearing."

EUGENICS, EUTHENICS AND LOVE—HOW THEY GO HAND IN HAND.—This is the fourth of a series of Monographs on the Improvement of the Human Plant, by Henry Smith Williams, M.D., LL. D., editor. Issued by The Luther Burbank Society, Santa Rosa, California. The author states in his foreword that:

"Heredity is more of a factor in human life than in plant life—more of a menace—more of a hope.

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ment of the human plant through a series of monographs, of which this is one."

This brochure gives good reasons from the study of plant life for restricting the fecundity of the unfit. Its reading will well repay the eugenic philanthropist and American patriot.

CHRISTIAN SCIENCE SENTINEL.—To those who may be brought to feel that the "Everlasting Arms are under them" Christian faith in Him that healeth the wounded in spirit and the broken-hearted becomes a helper to the "Good Physician" as the Great Physician called his follower Luke.

Psychiatry suggests to the physician not to ignore the psychiatry of faith and hope, nor the efficacy of the Pool of Siloam nor physical means the Divine Master commended and employed. Poor blind Bartimeus on the road to Jericho received his sight by means of the anointment of clay and spittle for instance. Let us have no quarrel with them who hear the Master's voice more clearly than we and closer follow Him nor harshly judge them.

THE PROPAGANDA FOR REFORM OF THE A. M. A. in proprietary medicine, although never submitted to us for review, represents the work of the Council on Pharmacy and this has been very serviceable to the medical profession, especially in its laboratory reports.

It reminds us, in these financially hard times, of the banknote detectors which used to be on every mercantile counter to tell the good from the bad money in circulation. It has been called the "Medical Rogues Gallery" like its companion the Dictionary of Quackery.

We acknowledge our indebtedness to the Council on Pharmacy for valuable and prompt laboratory information which has helped us to clear our pages of some false representation which we permitted to appear in them.

Proprietaries must be meritorious and ethical to be

carried in the *Alienist and Neurologist*.

CLINICAL SYMPTOMATOLOGY.—A unique little brochure (24 pages) has already been distributed to the medical profession by the Purdue Frederick Company of Gray's Glycerine Tonic fame. It consists of tables or charts giving the "symptom-complex" (of each of sixty different diseases,) of exceptional value for reference purposes. A copy can be obtained free by addressing this Company, 135 Christopher Street, New York City.

Contrary to the custom of some others among our proprietary caterers and friends, this little brochure is not submitted with any idea of instructing those who are to receive it. The author fully realizes how presumptuous on their part any such purpose or thought would be. This is a specially useful symptom remembrance for the country practitioner whose visits often take him many miles from his home and library.

INTERNATIONAL CLINIC WEEK at the N. Y. Polyclinic Medical School and Hospital during the International Surgical Congress, April, 1914. By Alfred C. Jordan, M.D., Eugene Hertoghe, M.D., Benj. Merrill Ricketts, M.D., John A. Wyeth, M.D., John A. Bodine, M.D., Alexander Lylr, M. D., William Seaman Bainbridge, M. D., New York.

An excellent clinical showing, well illustrated, of thyroid deficiency, myxedema, etc., before and after treatment and is worth any physician's consideration. This excellent brochure comes with the compliments of Dr. John A. Wyeth, Prest. of Faculty, which adequately commends it.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE.—2 Jackson Place, Washington, D. C. This circular comes with countenance and support of many of the philanthropic minds of our peace loving country. Among them Elihu Root, Oscar Strauss, Nicholas Murray Butler and our own Robert S. Brookings, the list being headed by

Joseph H. Choate and should be read by all peace loving patriots and philanthropists who believe that "Peace hath her victories no less renowned than war" and even more commendable and fruitful for the welfare of mankind.

ADDRESS IN MEDICINE before the Iowa State Medical Society, May 14, 1914. Remarks on Some Ordinary Headaches, Hugh T. Patrick, M.D., Chicago, Ill. Reprinted from Journal of Iowa State Medical Society, November, 1914.

Dr. Patrick is nothing if not interesting. A view of striking humor as well as of solid science embellishes all he writes. You will read this, gentle reader, and try cannabis indica probably, as the doctor commends, but will probably resort to the bromides finally, aided by pepsin and liver laxatives and your patient will be relieved and finally recovered if he or she lives long enough for the happy sequel of senile tranquility.

BURGERSDIJK & NIERMANS, Leiden, Nieuwsteeg No. 1. (Templum Salomonis)—Telefoon Interc. No. 1067. Boekhandel—Antiquariaat—Boekverkoopingen.

Notwithstanding the inconvenience to men engaged in literary pursuits caused by the present war in Europe we are glad to see the way is still open to this well-known cosmopolitan book store and we take pleasure in acknowledging receipt of this well-known firm's extensive catalogue of old and new books, including so many American authors' productions.

THE DISEASES OF PERSONALITY: THE DISEASES OF THE WILL AND THE PSYCHOLOGY OF ATTENTION.—By Theo. Ribot, translated and published by the Open Court Publishing Co., of Chicago, should have a place in every psychologist's and in every alienist's and neurologist's library. Reflectively read they will enlighten the veteran and amateur in psychological and pathological mental science. The price of each volume, cloth bound, is only seventy-five cents. Full set, cloth, \$1.75.

THE SMITH INDIAN CATARACT OPERATION IN THE LIGHT OF SCIENTIFIC INVESTIGATION.—A. S. Green, M.D., Chief of Ophthalmology, San Francisco Polyclinic and Post-Graduate School of Medicine and L. D. Green, M.D., Visiting Assistant Ophthalmologist, San Francisco City and County Hospital, Stanford University Medical Department. Reprinted from *Ophthalmology*, January, 1915.

DYNAMICS PSYCHOLOGICAL by F. L. Wells, McLean Hospital, Waverly, Mass. From the *Psychological Bulletin*, November 15th, 1914.

"Common Factors in Mental Health and Diseases," reprinted from *Science Monthly*.

"Note on Retention of Acquired Faculties." All by same author.

LA PERSONALITA DEL GIUDICABILE.—Nel Nuovo Codice di Procedura Penale, Estratto dall' Archivio di Antropologia Criminale, Psichiatria e Medicina Legale (1914, Vol. XXXV, Fasc. 3.) Prof. Leonardo Bianchi, Ordinario di Clinica delle malattie mentali e nervose nella R. Università di Napoli, Deputato al Parlamento. Torino, Fratelli Bocca, Editori, Milano, Roma, Firenze.

ONE HUNDRED AND FIRST ANNUAL REPORT OF TRUSTEES MASSACHUSETTS GENERAL HOSPITAL.—Including the General Hospital in Boston and McLean Hospital and the Convalescent Hospital in Waverley, 1914; Section A, Cambridge, The University Press. George T. Tuttle, M. D., Medical Superintendent.

HUMAN PLUMBING—AMELIORATION AND CURE OF CHRONIC INTESTINAL STASIS.—Illustrated. By William Seaman Bainbridge, M. D., New York City. Reprint from *The Charlotte Medical Journal*, October, 1914., Charlotte, N. C.

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Volume Eleven. Containing the Announcement of the
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ALIENIST AND NEUROLOGIST

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NO. 3.

A CONTRIBUTION TO THE STUDY OF PROGRESSIVE MUSCULAR ATROPHY AND A REPORT OF FOUR CASES WITH MENTAL DISORDERS.

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Washington, D. C.

PROGRESSIVE Muscular Atrophy is a term used to designate certain conditions which present as their most important feature a progressive wasting of the muscles. It is used rather loosely and in a general way to designate any condition presenting this feature but is also used more specifically to denote certain more or less well defined clinical entities. It is in this more specific designation that we have more or less confusion. Some writers consider Chronic Anterior Poliomyelitis, Amyotrophic Lateral Sclerosis and Spinal Progressive Muscular Atrophy under the single heading of Spinal Progressive Muscular Atrophy. Others consider all three separate and distinct clinical entities. Dana can see no reason for changing the name of a disease from Spinal Progressive Muscular Atrophy to that of Amyotrophic Lateral Sclerosis just because a certain amount of spasticity happens to occur in the course of what was thought to be the former disease syndrome and indeed it seems rather unnecessary

and only adds to the confusion already existing in regard to this disease. The symptoms of both conditions are practically identical with each other except for the addition of a spastic condition in the latter. The pathological anatomy is much the same in both disorders. In the first the destruction is more or less confined to the anterior horn cells but frequently the pyramidal and antero-lateral tracts are involved, while in the second condition the pyramidal tracts are involved first and later the anterior horn cells. It would seem that the two conditions are simply the manifestation of one and the same underlying disease process.

There are many conditions which produce muscular atrophies. Many of the muscular wastings have their origin in the muscles themselves as seen in what is known as Progressive Muscular Dystrophy. Others begin in the peripheral nerves as in the neural form of Spinal Progressive Muscular Atrophy and we also have those conditions which develop because of destruction of certain cells in the spinal cord. Aside from its blood supply a muscle depends on the lower motor neurone, the axis cylinder and the end processes for its integrity. We may have peripheral or reflex atrophies due to irritating joint processes. We may get muscular atrophy in Hysteria and this is explained as being due to a diminution in tone of the anterior horn cells. Muscular atrophy may occur following certain infectious diseases as Typhoid Fever, Diphtheria, Scarlet Fever, Syphilis, etc.; or it may follow certain toxic conditions as lead or arsenic poisoning. Oppenheim has repeatedly seen the rapid development of atrophy after operations on the motor cortex of the brain. Monakow is of the opinion that deficiency of the sensory, motor and vasomotor impulses may be the cause of the muscular atrophy. In the opinion of Wilson progressive muscular atrophy is the manifestation of a degeneration of the lower motor neurones and many cases give positive findings in regard to Syphilis. Fournier places a special form of muscular atrophy in his classification of the parasyphilitic diseases.

The cases which I have to present were selected because of the association of mental symptoms with the progressive muscular atrophy and it was thought that they might prove of interest for this reason. No well defined mental syndrome has been put forward as being due to this disease but certain mental aberrations have been noted in some of these conditions.

By some, a certain degree of mental reduction has been observed in that form of progressive muscular atrophy which presents bulbar symptoms and by them it is considered part of the symptom complex. Marie states that in amyotrophic lateral sclerosis with bulbar symptoms the mentality is more or less affected, intelligence is enfeebled, emotionality is increased and the tendency to laugh or weep is pronounced. Sometimes a demented condition exists. The patient is moody and intellectually and morally approaches the attitude of a child.

The literature concerning the occurrence of mental disorders in cases of progressive muscular atrophy is very scant and of course it would be impossible to come to any definite conclusion on the few cases which I have seen but it was thought worth while to add this small contribution to the subject. The first two cases of this series have for their most prominent mental symptom the occurrence of marked paranoid ideas and present a relatively small amount of mental reduction. The third case was rapid in its course and the only mental symptom noted was a slight lowering of the general intellect. The fourth case was one of General Paralysis of the Insane and presented the mental symptoms usually found in the advanced stages of this disease.

Before going on with a description of the cases it will probably be well to give a brief description of the disease progressive muscular atrophy and that form known as spinal progressive muscular atrophy and which probably includes both chronic anterior poliomyelitis and amyotrophic lateral sclerosis will be given. The same description applies in all essentials to all three. In chronic poliomyelitis the paralysis is supposed to occur first and the atrophy

later while in amyotrophic lateral sclerosis we simply add to the description, a condition of spasticity. In some cases the disease is clinically one of Spinal Progressive Muscular Atrophy but on pathological section we find sclerosis of the pyramidal tract.

In this disease we have a progressive wasting of the muscles dependent upon some diseased condition of the spinal cord, usually to a degeneration of the cells in the anterior horns of the spinal cord and frequently degeneration of the pyramidal columns. The condition begins as a rule in the small muscles of the hand but may begin in the shoulder girdle or the peroneal muscles.

The disease is not considered to be due to hereditary influences but in what is called the infantile form or the Werdnig-Hoffmann type there seems to be a distinct hereditary tendency. The etiology is obscure; but trauma, over use and exposure are put forth as causes. Many cases are undoubtedly caused by Syphilis and Wilson believes that if the question of antecedent Syphilis were carefully investigated in every case or if every case were subjected to the Wassermann test that this disease, like Paresis and Tabes, would take its place as a parasyphilitic disease. Dana maintains the importance of Syphilis in bringing about the typical form of the disease. The symptoms of the disease usually begin about middle life except in the infantile form when they are manifested early in infantile life. In this latter form the disease terminates after a varying period of time in death while in the other form the patients may live for years and then die of some intercurrent disorder.

The disease manifests itself usually between the third and fourth decades and the first symptoms noted are an awkwardness in the use of one or both hands, usually one more than the other. The thenar and hypothenar muscles then atrophy and the atrophy gradually extends to the flexors of the forearm and then to the extensors; it may even reach the deltoid. The trunk and neck muscles waste and the ribs become prominent. The lower limbs likewise may become atrophied and a number of

cases are on record in which the atrophy began in the lower limbs, especially in the peroneal distribution. Fibrillary twitching in the affected muscles and a diminution and subsequent loss of the deep reflexes are usually present. The fibrillary twitching is absent when the atrophy has reached to an extensive degree. In amyotrophic lateral sclerosis the reflexes are usually increased but this is not invariable. The electrical reactions are diminished or altered and the reaction of degeneration may even be present. There is usually little or no pain, that present being due to over use of the atrophying muscles. Pupillary changes have been observed, even stiff unequal pupils. These cases may be of luetic origin.

CASE I.—L. M. Admitted to the hospital in August, 1900, age sixty years. Family history as given by the patient was negative. He knew of no other members of his family similarly affected. Birth and childhood were normal. He claims to have always been well and never had any serious illness. He states that he had Syphilis in 1865. He was married but his wife died shortly after bearing him a baby boy. The patient earned his living by peddling and for some time before entrance to this hospital he solicited alms by exhibiting his deformity.

The patient states that his arms began to atrophy about forty years ago. The first thing that he noted was that his right hand grasp became weak, later this extended to the left and following this the muscles began to waste away. The small muscles of the hand were first affected, then the condition involved the muscles of the shoulders and from here extended down to the wrist. About twenty years ago his left leg became weak and the muscles began to waste and this condition slowly progressed so that for the past five or six years he has been unable to walk.

On admission to this hospital in 1900 he could walk fairly erect but there was some uncertainty in his gait due to a weakness of his left leg. Coordination was impaired and Romberg's sign was present. The pupils were small, did not react to light but did to accommodation.

Temperature sense was normal. Fibrillary tremors were noted in the affected muscles. There was paralysis of all the muscles of the right arm including the right pectorals, subscapular and trapezius, all of the left except the triceps and part of the deltoid. The muscles of the hands, arms, shoulders and left leg were atrophied and the muscles small and lacked tone and strength. There were no contractures. No scars of lues were noted.

Since the patient has been in the hospital the condition has progressed very slowly. On admission he was able to use the left arm slightly but at the present time he cannot move either arm except by swinging his whole body. The muscles of both hands are almost completely atrophied. He is unable to flex or extend the fingers and the hands flop loosely about, presenting a typical monkey hand. The muscles of the forearm are almost entirely gone but there is a slight amount of use in the pronators of the right hand. He is unable to flex or extend the forearm on the arm. The muscles of the upper arm are completely wasted, there being practically nothing but skin and subcutaneous tissue over these areas. The head of the humerus is prominent. The deltoid and triceps seem to be entirely gone. The pectoral muscles are almost completely atrophied on both sides. The trapezius is partially preserved and the patient can raise and lower the shoulders. The muscles of the scapular are wasted and practically obliterated. The leg and thigh muscles of both lower extremities are atrophied but the wasting seems to be concentric. The calves are equal in size, each measuring 23 cm. The left thigh is somewhat smaller than the right, the former measuring 30 cm. and the latter 33 cm. The strength in both extremities was about equal. The patient is able to flex and extend the legs on the thighs and the thighs on the abdomen and also to adduct and abduct the legs against considerable resistance. None of the usual reflexes could be elicited. The patella reflex is absent and there is no ankle clonus or Babinski. The pupils are pin point in size and did not react to light or accommodation. No fibrillary tremors

were elicited and none have been observed for the last four or five years. Sensation appears normal. Wassermann reaction with the blood serum negative. Luetin test negative.

During his entire residence in the hospital there has been no essential change in his mental condition. He is quite delusional and has marked persecutory ideas. He says that an English Lord is at the bottom of all his troubles and that he was kidnapped and sent over here. He thinks that people are trying to poison him and at times for this reason he has refused to eat. He is usually cross and irritable and frequently indulges in profane and vulgar language. At times auditory hallucinations have been in evidence. The patient is quite euphoric and thinks that he is a great man. He calls himself "Captain Kidd, the public pirate and highway robber." Memory is unimpaired and general information is good. Ideation is rather poor. He has no insight whatever into his condition and thinks that he could leave the hospital and go out and make his own living.

Here we have a rather typical case of progressive muscular atrophy but associated with it are symptoms of mental disease. This mental condition is characterized by delusions of grandeur and persecution and to a slight extent by auditory hallucinations. The psychosis became manifest at the age of sixty. The patient has arrived at that age when the individual finds it hard to adjust himself to conditions. He is rendered helpless by reason of his physical condition and develops a defense mechanism which manifests itself in delusions of persecution and grandeur. He projects his difficulties on the outside world as ideas of persecution and compensates by developing ideas of grandeur.

The patient gives a history of having been infected with syphilis in 1865. Ten years later, in 1875, he noticed the beginning of his physical disorder. He presents no other signs of syphilis except for the Argyll-Robertson pupil and Romberg's sign. As against syphilis we have a negative Wassermann reaction with the blood serum

and a negative reaction to the luetin test. This would seem to rule out syphilis but we have a fairly definite history of syphilis and the presence of the Argyll-Robertson pupil to consider. Spiller has reported a number of cases of progressive muscular atrophy in which both the history and the Wassermann reaction were negative for syphilis but post mortem examination showed the presence of this disease in the spinal cord. I feel, therefore that we cannot absolutely rule out this condition and we must consider the mental disorder in this case as being possibly due to it. In certain cases of tertiary syphilis we occasionally find paranoid conditions present which are quite similar to that we have in this patient.

Disease of the cerebral arteries must be considered. The age of the patient renders this condition probable. The mental syndrome is such as we frequently find associated with cerebral arteriosclerosis. The superficial arteries are not sclerotic and while this cannot be considered as an indicator of the condition of the cerebral arteries, if they were sclerotic we would expect such a condition in the cerebral vessels. No focal symptoms have been noted in the patient. The course of the disease has not been such as we would expect in arteriosclerosis. There has been no essential increase in the intensity of the mental condition and if it were due to disease of the arteries of the brain, which is a progressive condition, we would expect greater degree of mental reduction after fifteen years.

Dementia Precox of course must be thought of but it is hardly likely that it would remain latent until the age of sixty or if the condition had been present in a mild form for years we would probably get a history of eccentric characteristics being present for some time.

CASE II.—M. M. Admitted to the hospital in 1900, aged forty-five. Family history entirely negative. Birth and childhood uneventful. No serious illness. He was a clown in a circus for a while, later worked as a telegrapher and finally became a bugler. He had gonorrhoea in 1887. He denied syphilis but stated that he had an

eruption on his face and chest and his hair came out. The first symptoms of his present disorder were noted in 1887 and came on gradually with slight pains in his right shoulder and hands. When playing the bugle he found it difficult to hold the instrument up because his right shoulder was weak. He could not manipulate the keys with his left hand as well as formerly, as they would cramp up and he would have to use the right to straighten them out. There was some pain in his arms and a great increase in perspiration of the upper extremities.

He first received treatment for his condition in 1891 and at that time there was decided atrophy of the upper extremities, motion was almost completely abolished, sensation not impaired. The reflexes were absent in the affected muscles but were slightly increased in the lower extremities. The pupils reacted normally. Fibrillary tremors were brought out by tapping or extending the muscles.

During the patient's residence in the hospital this condition remained practically stationary. He was unable to use his arms at all and they hung limply at his side. The muscles of the hands markedly atrophied and presented the typical monkey hand. The muscles of the forearms, arms and shoulders were almost completely gone. The trapezius seemed to be in fair condition and he was able to raise and lower his shoulders. The scapular muscles were markedly atrophied. There was no loss in the tactile or temperature sense over the regions atrophied. No fibrillary tremors were noted at this time. The Wassermann with the blood serum was negative.

The most prominent mental manifestation that this patient showed throughout his residence in this hospital were the marked paranoid ideas. He thought that people talked about him and called him vile names. Whenever he would see two people talking together he would think that they were talking about him. These voices threatened to kill him and at times he was afraid that his food was poisoned. He was continually complaining that he was

not treated as well as the other patients and had many fancied grievances toward the attendants. On several occasions he thought that the doctors were going to practice vivisection on him. His persecutory ideas were constantly changing. At times he evidently had visual hallucinations. He thought that ghosts and spirits were continually following him about and that they warned him of approaching danger. These spirits rapped on the walls of his room at night. He was accurately oriented in all respects. He had no insight whatever into his condition. His memory and general intelligence were somewhat reduced. He had a fair knowledge of current events.

The mental symptoms in this patient are almost identical with those in the first patient. Paranoid and grandiose ideas were present. The paranoid ideas were most prominent in this case. Auditory hallucinations were much more prominent in this case than in the preceding one. This man's psychosis became manifest after he became practically helpless by reason of his physical condition and the possibility of the psychosis being in the nature of a defense reaction must be thought of in this case.

In this patient we also have a fairly definite history of syphilis. The pupils were irregular but reacted normally to the usual tests. The Wassermann reaction was negative with the blood serum. We have less in this case than in the previous one to base a diagnosis of syphilis but with such a definite history of infection and the fact that the Wassermann reaction particularly in tertiary syphilis is frequently negative it must be considered.

The age of this patient, forty-five, is rather early for the development of arteriosclerosis but not by any means too early. As in the previous case, however, there were no clinical signs of arteriosclerosis and the course of the disease was not at all characteristic.

In this patient the possibility of paranoid precox must receive a good deal of consideration. The mental picture is quite suggestive of this condition. One would

expect, though, after fifteen years that there would be considerably more deterioration than manifested by this patient.

CASE III.—J. C. Admitted February, 1912, aged 35 years. Family history negative. Common school education and enjoyed good health. Typhoid fever at the age of ten and rheumatism between the ages of twenty and twenty-three. Had hard and soft chancre at the age of eighteen which came on nine days after exposure. Denied secondaries. Gonorrhoea about ten times. In 1911 the patient noticed that the muscles of his right arm were becoming weak. Began, according to his brother, in 1910 and first noted by a marked change in his handwriting. This was particularly noticeable when he was required to wash windows when he found that he could not reach up as high as he had been accustomed to do. Shortly after this his throat began to bother him, he became hoarse and was continually annoyed by mucous phlegm rising in his throat. He noticed difficulty in articulation. The muscles of the left side of the neck then became affected and there was some pain in the muscles, especially on arising in the morning. This pain lasted for three months and was then distributed to both sides of the neck. This was followed by muscular weakness. Five months before admission his speech was so affected that at times he could not talk at all. He had difficulty in swallowing liquids which would at times return through his nose and other times run into his trachea. About one month previous to admission his left arm became affected. He denied any convulsions, vertigo or headaches. He never had any pain except in the muscles in the back of his neck and this pain was dull in character and noticeable when he turned his head. He received two doses of salvarsan in 1911.

On admission he was unable to raise his arms to a right angle with his body or place them above his head. The muscles of both sides of the neck, shoulders, scapular region and arms showed marked wasting and almost complete paralysis. Breathing was diaphragmatic entirely,

The intercostal and accessory muscles of respiration were paralyzed. In the right arm the triceps was weak but still retained some power. The biceps was also weak. The flexors of the hands were somewhat stronger than the extensors. The opponens, pollices and abductors were normal as were also the lumbricales. The right supra and infraspinatus reflex was absent. The right trapezius and splenius capitis were wasted and very weak. The sterno-cleido mastoid on both sides was wasted, more especially on the right side. The left arm was slightly more powerful than the right but presented a similar condition. The hand grasp was much diminished on the right side. The pronators were weak but more powerful than the supinators. There was practically no power in the biceps. The triceps was not so markedly affected. The right side of the pillars of the pharynx were partly paralyzed. The lower part of the face was affected. The 3rd, 4th, and 6th nerves functioned normally. There was tremor of the tongue but little wasting. The plantar, tendo-Achilles and abdominal reflexes were present. All the reflexes in both arms were diminished or absent. Sensation was normal. The pupils were irregular and moderately dilated but reacted promptly to all the tests. Fibrillary tremors were present and quite marked. The Wassermann reaction with blood serum was negative to double the quantity. Lumbar puncture and examination of the spinal fluid showed the Wassermann to be negative, appearance of the fluid clear, protein content not increased and cells per cmm. one-half.

Following admission to the hospital the paralysis of the neck muscles became more marked so that his head would fall to either side and could not be held erect without support. Bulbar symptoms became marked and the patient died four months after admission of bulbar paralysis. At autopsy the brain showed nothing pathological. The cerebro-spinal fluid was slightly increased, the spinal cord small and hard. On section the anterior horns of the cervical cord were reddish in color. There

were many bony plates on the posterior aspect of the spinal pia.

During his short residence in this hospital the only psychotic symptoms manifested were those of a beginning dementia. There was a slight lowering of the general intelligence. He acted in a rather childish way to his environment. No delusions or hallucinations were present. His mental reduction was noted more particularly previous to admission here by his associates in the army who observed a marked reduction in his ability to understand and carry out orders. When given an order he would almost immediately forget it and fail to carry it out.

The disease in this patient ran a rapid course resulting in death from bulbar paralysis after a few months. It is in such cases as this that Marie finds mental disorders as part of the symptom complex. We have a simple deterioration present in this case. Whether this is due to organic changes in the brain it is impossible to say. No gross lesions were found in the brain and unfortunately a microscopical examination was not done. It is quite possible that in these cases where we have bulbar involvement the degenerative process has extended into the brain. A number of observers have found the degenerative process extending even as far as the cortex.

This patient also gave a marked venereal history. He denied ever having secondaries but it is quite possible that they might have been overlooked and the very marked venereal history forces us to consider syphilis. This disease was considered so probable that while in the army he was given two doses of salvarsan intravenously. When he arrived at the hospital approximately four months later the Wassermann reaction was negative with both the blood serum and spinal fluid, the other characteristics of the fluid being normal. Whether treatment modified this is hard to say but I feel sure that two doses of salvarsan would ordinarily render the blood serum negative to the Wassermann test and possibly modify the findings in the spinal fluid but I doubt very much if it would render a positive Wassermann negative or reduce an

increased protein content. The mental symptoms in this case were suggestive of those due to an organic condition of the brain.

CASE IV.—E. C. L. 58 years old on admission in 1913. Family history negative. Birth and early history uneventful. Used alcohol freely. Education good. Employed as bookkeeper until about the age of forty-eight, when he had to quit work because of weakness of his hands. About 1903 the muscles of his left hand began to atrophy. A short time later the muscles of his right hand began to atrophy also. This condition slowly progressed up the forearm. In 1911 his speech became affected. Six months previous to admission to this hospital he began to act in an eccentric manner. His memory showed marked defect.

Physical examination showed the small muscles of both hands and forearms markedly atrophied. There was also partial atrophy of biceps and triceps muscles on both sides, more particularly on the left side. There was present a marked speech defect and also considerable difficulty in swallowing. The tongue showed no atrophy but lips were markedly tremulous. The biceps, triceps, and patella reflexes present. Ankle clonus on both sides. Pupils round and contracted and did not respond to light. No fibrillary tremors noted.

The patient's mental condition was one of advanced dementia. He was entirely disoriented and led merely a vegetative existence. He was extremely untidy in habits. Wassermann reaction complete positive with both blood serum and spinal fluid. The appearance of the fluid was clear, protein content increased and cell count $19\frac{1}{2}$ per cmm.

This patient presented a rather typical picture of general paresis. The mental symptoms were those of an advanced case. The serological findings were absolutely conclusive of this disease. The only point of interest here is as to the connection existing between the muscular atrophy and general paresis. Are these conditions independent of each other or dependent on the same etiologi-

cal factor? The patient was too demented to give any history of infection with syphilis but we know that this disease is a necessary antecedent for the production of general paresis. The interval between the initial lesion and appearance of symptoms of paresis is anywhere from ten, fifteen or twenty years. The muscular atrophy in this case began twelve years before symptoms of paresis became manifest, therefore, we may assume that syphilitic infection antedated the development of the muscular atrophy. On the other hand the patient was at that age when progressive muscular atrophy is supposed to develop anyhow. Therefore it is hard to claim absolutely that syphilis was the etiological factor.

In conclusion I wish to say that it is not the intention of the writer to try and claim that progressive muscular atrophy is associated with any well defined psychosis. Very little is said in regard to mental symptoms in this disease and it was thought that these few cases with their attendant psychotic manifestations might be of value as a contribution to the subject.

In the first two patients the mental syndrome is practically identical and rather closely associated with the physical disorder. The physical condition in both had existed for years without manifesting any evidence of a psychosis but the condition is a progressive one and evidently the etiological factor continued to be active. Therefore it is quite possible that the degenerative process may have extended so far as to invade the brain or else produce some toxic substance which finally attained sufficient virulence to cause a disturbance in the functioning powers of the brain. It would be difficult to make any diagnosis other than that of a paranoid state unless we should desire to be more specific and say associated with progressive muscular atrophy.

The mental and physical symptoms seem to be more closely connected with each other in the third case. It is in such cases as these that Marie finds the presence of psychotic symptoms and he considers them part of the symptoms complex. There seems to be a definite

relation between the physical and mental condition here and I would not hesitate to diagnose the mental condition as a psychosis associated with progressive muscular atrophy.

The mental symptoms in the fourth case are frankly those of an advanced case of general paresis and really call for no further comment.

The cases were interesting to me from the viewpoint of the psychiatrist and it is to be hoped that they may prove of interest to others from a similar viewpoint.

A REPORT OF THE CLINICAL AND PATHOLOGICAL FINDINGS IN A CASE OF HYSTERO-EPILEPSIA AND HYSTERO-EPILEPTOID.

BY J. ALLEN JACKSON, M. D.,

Chief Resident Physician of Philadelphia Hospital for the Insane.

CHIEF COMPLAINT.—H. L., white, aged 43. Was admitted to the Philadelphia General Hospital, May 21, 1908, with a chief complaint of hysteria and convulsions, at the request of a police surgeon for the reasons stated: that he had tried to commit suicide and had had two epileptic attacks.

FAMILY HISTORY.—The family history at that time shows that the father died of apoplexy at the age of 63; the mother of Bright's disease at the age of 43; the patient had three brothers who were living and well.

PAST MEDICAL HISTORY.—Patient was somewhat backward all his life; had convulsions in his fifth year, and measles when a child. At the age of seven years he fell out of a swing, injuring his head. The ward notes made at the time of admission state that the patient had been seen by two physicians about three months before, and that they had informed him he had some mental trouble. He had had two strokes that morning and one in the evening; the first stroke involved the whole left side and the second stroke involved the same side. He was paralyzed for eight weeks and recovered, but he could not use his left side as well as he did formerly. He was in the Park and fell over, and they said he tried to commit suicide. The Park patrol took him to the 23rd district and then he was brought to the hospital. He said he had been

worried about the loss of money, and that he had been treated in several hospitals.

Examination showed the left arm flexed and rigid, fingers rigid and semi-cone shaped. Left leg rigid, with the left foot held in the position of foot drop; could be relaxed upon repeated commands and active manipulation. Reflexes were equal and slightly exaggerated. Hemianesthesia of the left side; anesthesia of tongue. Impaired vision of the left eye; tubular vision of the left side, restricted vision of the right side, pupils blue, normal reaction to light and accommodation. Apex beat, fifth interspace midclavicular line; first impulse strong, soft systolic murmur at the apex, first sound good, second sound accentuated, pulmonic accentuated. Pulse, fairly good volume and tension.

On June 2, patient was discharged as improved. Three days later he was readmitted with a repetition of his former symptoms. Twelve days later he requested his discharge as his condition had cleared up. Shortly thereafter, however, the patient became boisterous, unruly, choked his nurse—and was immediately sent to the psychopathic ward from where, four days later, he was committed to the Hospital for the Insane suffering from what was on admission diagnosticated as hysterical insanity.

On admission he gave exhibition of having fits, at which time he was careful not to injure himself. He was grandiose, silly, and had vague delusions.

Five months after his admission he was discharged, and was again readmitted less than three months later with the same mental and physical symptoms.

This process of discharges and readmissions continued until his final admission in 1911, when true epileptic-like seizures were noted, as the patient in falling severely injured himself. Mentally, his condition was one of argumentation, alternating with quietude and subsequently mild dementia. There was no return of his anesthesia, or tubular vision; his eye-grounds were normal, blood negative, Wassermann negative, urine and feces negative.

On July 9, 1913, he was seized with convulsions. Examination showed he was dull, speech slurring, pupils unequal, reacting to light and accommodation. Tongue protruded to the left, left side of face was smooth, unable to lift corner of mouth, unable to wrinkle forehead on left side, complained of headache, left arm slightly elevated, moved left leg fairly well, faint suggestion of Babinski on the left, sensation normal. On April 15, his muscular strength returned but his speech defect was present.

On July 2, 1914, he suddenly died.

During the patient's period of treatment, extending over several years, he manifested an unusual array of clinical symptoms indicative of hysteria with all its stigmata, as well as symptoms of true epilepsy and organic hemiplegia. The pathological findings which follow are of an equal interest.

PATHOLOGICAL REPORT

Chronic mitral endocarditis with stenosis and dilatation of left auricle. Recent mitral vegetation with closure of mitral valve. Hypertrophy of right ventricle. Chronic aortic endocarditis.

Bilateral hydrothorax.

Edema and congestion of lungs.

Healed tuberculosis in left peri-bronchial lymph nodes.

Old infarcts of spleen.

Chronic interstitial nephritis.

Congestion of liver. Solitary gall stone.

Edema of brain.

HEART.—Both auricles contain small quantity of largely fluid blood, of which there is a small quantity in right ventricle. Left auricle dilated. On opening left auricle it presents at lower portion a mass 2 c.c. in diameter that almost entirely blocks the mitral opening. The mass is quite firm, mostly dark red with a greyish band over the surface, and is attached to the anterior leaflet of mitral valve. Viewed from ventricular side the mitral leaflets are greatly thickened and narrowed, including the tendinous cords. The valves present a funnel-shaped

opening which barely admits the tip of the little finger. The thrombus described in connection with the auricle can be seen through this buttonhole opening. The aortic leaflets are thickened, especially at the margins, and inverted. They are also shortened. The endocardium is slightly grey. The muscle is dark, almost brownish red in color. Left ventricle 1.4 c.m. thick. Right ventricle 0.7 c.m. thick.

BRAIN.—Fairly firm. Moderately edematous. Vessels at base not sclerotic. Small vessels moderately prominent. No gross evidences of disease. Falx contains near the anterior portion a spicule of bone 4 c.m. long; 1 c.m. broad; and 0.5 c.m. in greatest thickness.

SPINAL CORD.—Shows no gross lesions.

A STUDY OF THE BRAIN BY DR. SPILLER shows that an area of old softening is found in the region of the right external capsule, extending from low in the cerebral hemisphere to the level of the upper part of the lenticular nucleus. This area in its upper part indicates fibres passing to the internal capsule, and seems to be the cause of the degeneration of the pyramidal tract. Under the microscope this area shows overgrowth of neuroglia tissue and destruction of nerve fibres with much lymphocytic infiltration. The right anterior pyramid is much degenerated, as is also the left crossed pyramidal tract. There was, therefore, an anatomical cause for the left hemiplegia. Distinct lymphocytic infiltration is found about the vessels in the cord of the cervical region, but lymphocytic infiltration is not distinct in the midthoracic or lumbar region or in the medulla oblongata. The nerve cells of the anterior horns of the spinal cord are in good condition. There is some proliferation of the intima in the vessels of the pia over the medulla oblongata. The pia is greatly thickened over the left paracentral lobule, and moderately thickened over the right paracentral lobule. Moderate but distinct lymphocytic infiltration is found in the pia of each paracentral lobule. There is slight lymphocytic infiltration around the vessels in the cortex

of these lobules. The Betz cells are well stained. The optic nerves are not degenerated.

The Findings suggest a moderate degree of syphilis of the brain and cord.

34th and Pine Streets.

IS GENIUS A SPORT, A NEUROSIS, OR A CHILD POTENTIALITY DEVELOPED?*

By JAMES G. KIBERNAN,

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A most quaint expression of the doctrine of disease producing genius is that of C. B. Reed¹ who thus shows the usual error of ignoring morbid irritability while fostering attention on genius and its products.

"Among the non-febrile affections that are under suspicion as stimulants to intellectual activity may be mentioned asthma, which is represented in literature by Macaulay and in statesmanship by William III. In confirmation, however, we can present no data except the numerous cases that might be quoted.

"In this category also is gout, which takes its origin not from micro-organisms, but from disturbances of the

*Continued from The Alienist and Neurologist, May, 1915.

bodily metabolism, and is characterized by fever only at the crises. It is fallacious, but interesting, to find that, while this disease formed barely 1 per cent. of the chronic medical disorders of the past, over 5 per cent. of its victims were literary workers. The effect observed is similar, as we shall see, to that found in bacterial diseases, but the method of operation is quite different. In place of the optimism and feverish intensity, there is a massive, patient energy; without haste, to be sure, but also without rest.

"One writer goes so far as to compare these classes with presumptively normal individuals and asserts that those afflicted with gout, judged by their books, are superior in imagination, style, and intellectual power to any equal number of healthy workers who can be chosen. Without attempting to substantiate this predication, the evidence shows that Gibbon was urged onward by a stately but irrepressible momentum for which his literary occupation afforded only a partial outlet.

"Bulwer Lytton's irritability and melancholy were widely known, and so, too, was his desperate devotion to work and tobacco. Gibbon and Lytton were great sufferers from gout, and thoroughly exemplify the class which included Landor, Campbell, Milton, Steele, Sydney Smith, Dryden, Fielding, Defoe, and many others in literature; Rubens and Claude Lorraine among the painters; actors like Charles Kean, and statesmen like the Pitts.

"These unhappy owners of creative brains were the victims of their organizations. They were compelled to work by the toxins they elaborated, and it is not too much to say that the periods of active production probably stood in close relation to the ebb and flow of the toxic tide."

William III's asthma was probably bronchiaectatic causing the irritability which marred his tact and led to his difficulties with the English. But for this he would have been, great as he is, a far greater statesman, since many difficulties would not have occurred. History

of the greatest of the Pitts destroys Reid's position. As I pointed out² over three decades ago, the dangers of George III's lucid moral imbecility³ was more demonstrable than those of his irregularly periodic insanity, especially at the outset of the War of Independence when the gouty mental eclipse of a great statesman flung all power into his hands.⁴ George the third was a backward child, religious, priggish, egocentric, selfish and ungrateful. His shrewd grandfather, George the second, pronounced him "good for nothing but to read the Bible to his mother." He, probably the most imbecile mentally and morally of English Kings, was intellectually and ethically akin to the English plutocrats who urged on his war upon English, Scottish, Irish, American, and French freedom. From avarice he evaded his children's claim on his civil list thus producing that attempt at taxing Americans without representation which formed the United States. His political creed for Englishmen (absurd in one who owed his throne to the 1688 Revolution and a resultant parliamentary statute not "divine" right) was: "Fear God and Honor the King." Strong as Byron⁵ puts the case against him:

From out the past

Of ages, since mankind have known the rule
Of monarchs—from the bloody rolls amass'd,
Of sin and slaughter—from the Caesar school,
Take the worst pupil, and produce a reign
More drenched with gore, more cumber'd with the slain.

He ever warr'd with freedom and the free:
Nations as men, home subjects, foreign foes,
So they that uttered the word "Liberty"
Found George the Third their first opponent. Whose
History was ever stain'd as his will be
With national and individual woes.

Yet this censure is mild compared with the sober judgment of Green,⁶ Macaulay,⁷ and Greville,⁸ and the caustic invective of Junius⁹ and Patrick Henry.¹⁰ Toward women he was as guilty¹¹ secretly of base betrayals

as George IV was blatantly. His avarice, his worship of the sacred strong box, his cant, his "law and order" and "farmer" dodges, his deference to the "respectable business man" still so sway the British philistine that Thackeray¹² and Besant¹³ have written mawkishly fulsome biographies of him. His aid to the "law and order" dodge (whereby plutocrats defraud workmen of wages by threats of imprisonment) was prompted by more despicable meanness than cant. He and "snuffy" Queen Charlotte not only shared¹⁴ in jobs but eternally tried to extend the field of the laws forfeiting a felon's goods to the king. For this purpose more offenses were made capital during the reign of George III alone, than during the reigns of all the Plantagenets, Tudors, and Stuarts, put together. The most venial crime was severely punished. The result, as the satirist sung, was that:

"Scarce can our fields, such crowds at Tyburn die,
With hemp the gallows and the fleet supply."

These executions did not reduce crime. Forgery was seldom if ever pardoned, yet, as James Payne¹⁵ points out, forgeries increased from fifteen prosecutions in January, 1798, to two hundred and forty-two in January, 1819. For the worst judicial murders, George III and the shop-keeping, manufacturing, and merchant classes, were directly responsible. A husband was pressed for a seaman. Left to starve with two children, one at the breast, the wife stole a bolt of cloth and escaped. Her conscience troubled her, she returned, replaced the cloth and was captured. She was found guilty and sentenced to death. An appeal in her favor to George III was rejected because the "law and order" wool merchants demanded an example. The child was taken from her breast just ere she was hanged. It must be admitted that George III, as Dunscombe¹⁶ shows, was more a Hanoverian junker than an English constitutional king. The younger children, noticeably the Duke of Kent (father of Queen Victoria) were put in charge of German combinations of pedant, spy, boodler and rascal. Of the \$5000 annuity granted the Duke, all but \$416 was

pocketed by the German governor. A similarly brutal boodler is depicted by Burney.¹⁷ Altogether, as Green¹⁸ shows, the state of the English and Irish Church during the reigns of George III and George IV was as low as that of the Church during the reign of Charles II and his immediate successors. The subordinate clergy were usually appointed by dissolute squires and nobles to whom they had previously played the part of panders and sycophants. Such men naturally became enthusiastic supporters of "church and king" and headed the mob, the chemist from Birmingham because of his republican opinions. The Tory reaction consequent on the downfall of the French monarchy enabled the Church of England to denounce liberals for mild lapses while condoning gross violations of decency in the Tories.

William Paley,¹⁹ the author of the "Evidences of Christianity" was refused ecclesiastic preferment because he had written: "Among men you see the ninety and nine toiling and scraping together a heap of superfluities for the one and this too sometimes the feeblest and worst of the whole set."

George the Third was brought up in the junker absolutist school. This, like Munsterberg²⁰ today, thus reverted to the primitive doctrine—the absolute. If the things which we proclaim true and beautiful, moral and religious, were preferred by us "simply because they gave to you or to me or to the greatest possible number the most intense possible individual pleasure," then we would still remain in a world where nothing has an absolute value, and where "what we call ugly or inharmonious, untrue or immoral, has just the same right to be called valuable if somewhere people chance to have so curious a liking. Yet such is the prevailing attitude of modern science, which accepts our ideals of beauty, of religion, of morality, as merely products of social development, and at best provisional." Even among present-day philosophers, he adds, it is the fashion to take the whole life of reason as a practical scheme without absolute dignity. Science itself must fall asunder if we disbelieve in ab-

solute ideals; and that esthetic, moral, and religious values belong forever to our real world, which without them would be, not a world, but a chaos; not real, but a dream. The universe is a melody in which those first tones have the right to demand that last one. Every one of us lives in a chaos of experience. . . . But by a fundamental act of our over-individual personalities, we transcend the chaos; we become intelligent subjects by creating the idea of a world which is common to us. To make a world out of our experience means—and can not mean anything else—to apperceive every bit of the chaos as something which must will to be itself. Thus self-fulfilment becomes the highest good when the will of the individual is in harmony with the will of the universe. But the will to be itself must lead to different demands, and each of these demands thus introduces a special group of values into the world, eternally given with its deepest ultimate structure. To be itself may mean, firstly, that our bit of experience is to be preserved, is to last through ever new experiences, and is to be found again and again. The satisfaction of this demand gives us the values of truth. But to be itself may mean, further, that our bit of life experience is to stand for itself, complete in itself, independent of everything beyond it. The satisfaction of this desire gives to the world the eternal values of harmony and beauty. Thirdly, to be itself may also mean that our bit of experience demands a completion which it has not yet reached, and which it aims thus to secure. The satisfaction of this demand gives to the world the values of progress and law and morality. And, finally, to be itself means to be ultimately without inner contradiction, to be a unity. If those various desires interfere with one another, if the order of knowledge and the beauty of happiness and the duty of morality can not dwell together, then we have not a world which remains really unified in all eternity. Thus arises the ultimate demand that all the values become one, that the world remain absolutely itself; and the satisfaction of this demand brings us the values of re-

ligion and philosophy. Wherever this realization is completed in the connections of truth, in the self-fulfillment of art, in the loyalty of duty, in the beliefs of religion, and in the convictions of metaphysics, there a personal satisfaction is reached which must be absolute and eternal, as it is determined by no individual need but only by the acknowledgment of the world as such. Our need to understand the world as a whole, he continues, can be fulfilled only by "the system of our convictions," of which the immediate form is religion.

"If we transcend the outer world by our convictions, we come to God; if we transcend the social world, we come to immortality; if we transcend our inner sphere and link it with religious convictions, we come to the belief in providential leading. If every one of these conceptions of the world of things and of men and of duties developed into a system in which the logical, esthetical, and ethical demands are unified, in which the causal events of the universe and the moral duties and the desire for happiness are no longer in conflict. Religion, too, can speak a hundred languages, as the logical, esthetic and ethical demands which must be harmonized may vary from man to man, from time to time. But the value of the conviction that the reality in which we live, if we knew it completely, would be perfectly harmonious in the totality of its demands is eternal and absolute. But just as science and art and civilization develop systematically the naive apperception of the immediate values of the world, so . . . philosophy completes the function of religion. Philosophy harmonizes, too, the conflict of demands, but not by building up a superstructure of religious convictions, but by laying down a substructure, on which this whole world of appearances can rest, a substructure out of which the apparent conflicts can be understood as apparant only, and thus as not really conflicting in the ultimate being of the world. The critical philosopher turns indeed to the outer world, not to seek God beyond it, but the transcendental consciousness underlying the idea of the world itself; and he turns to

the world of men, not to make men live in time after death, but to reach the transcendental act of reason, by which alone the life of mankind can attain all the value of reality. And to the inner world he finally turns, not to seek its religious ties with the absolute beyond, but to understand its transcendental selfhood as itself the absolute condition of the whole theoretical and practical reality."

This is a decided reversion to the anthropocentric days of the scholastic philosophers who revered the idols of the cave, den, etc., whom Bacon destroyed.

The truer, more benign, non-egocentric philosophy is that paraphrased by the German student song:

"Nothing is and nothing's not
But everything becoming."

The body in gout, remarks Sydenham,²¹ is not the only sufferer and the dependent condition of the patient is not his worst misfortune. The mind suffers with the body and which suffers most it is hard to say. So much do mind and reason lose energy as energy is lost by the body, so susceptible and vacillating is the temper, such a trouble is the patient to others as well as himself, that a fit of gout is a fit of bad temper. To fear, anxiety and other passions, the gouty patient is a continual victim; whilst as the disease departs, the mind regains tranquillity.

Of the mental state from gout Watson²² draws the same picture. The mental phenomena manifested under gout by the great Earl of Chatham soon after the repeal of the "Stamp Act" had no little influence on the future of the Anglo-Celtic race. He, the idol of the Americans whom he had protected against the French and Indians and whose views as to taxation he had supported, became insane at a very critical period of his own career and of the relations of Great Britain to America. The Stamp Act had been repealed, Pitt's policy had triumphed and his policy was the correctness of the view adopted by the Americans anent the unconstitutionality of the Stamp Act. He formed a ministry and then became insane,

in a manner described by Macaulay²³ in his inimitably pellucid style. Pitt's insanity led him to fall into the snares of that cunning paranoiac, George III. Pitt at this time was as eloquent as ever, and no one suspected him of mental disorder, but his habits became more and more eccentric. A horror of loud sounds grew upon him. Though the most affectionate of fathers, he could not bear to hear the voices of his children and laid out great sums buying up houses adjacent to his own at Hayes, merely that he might have no neighbors to disturb him with their noise. He then sold Hayes and took a villa at Hampstead where he again began to purchase houses right and left. At Burton Pynsent he ordered a large extent of ground to be planted with cedars which had to be collected all over England and were, by his orders, planted by torchlight. No man was notoriously so abstemious as Pitt, yet at this time the profusion of his kitchen was the marvel of epicures. Dinners were always dressing, as he had a capricious and fanciful appetite and when he felt inclined to eat, everything must be on the table. As Macaulay remarks, in the true spirit of an alienist, setting an example which could be followed to advantage, by both lawyers and physicians, other circumstances could be detailed, which, separately and singly, were of little moment, but, combined and contrasted with surrounding circumstances, and with Pitt's previous and after character, justified a diagnosis of insanity. While in this fit of planting, Pitt was summoned to form an administration, and his notes to his colleagues *in posse* were so arrogant that even the despot, Louis XIV, would have deemed them unfit to use in correspondence with a French nobleman.

The ministry then formed by Pitt displayed anything but sagacity. In it irreconcilably bitter personal and party enemies were so mingled that they could not but conflict with each other. Pitt with an equal abandonment of his sagacity and in somewhat of a contrast with the course of the old English families from which he sprang, accepted an earldom, thus ruining for the time being

his popularity in England and his influence on the continent. Up to the time of the appearance of the mental phenomena already detailed, Pitt had been tormented with hereditary gout. The disease had been suppressed by remedies whereupon the psychical symptoms described suddenly appeared. He became melancholy, irritable and fanciful. The state of public affairs was embarrassing; his colleagues were in constant dispute; his opponents were clamoring against him, yet he, the clear-headed statesman, the man of whom Frederick the Great said, "England has been long in labor, but she has brought forth a man," whined that he could be saved from all these misfortunes only by repurchasing the house he had so capriciously and hastily sold. This fancy accomplished, he was somewhat easier, but when business was mentioned Pitt, the energetic ally of Frederick the Great, the dictator of Europe, trembled and burst into tears. He passed twenty-one months in gloomy seclusion, while his colleagues carried out the measures proposed by that morally imbecile paranoiac, George III, under, as it were, Pitt's sanction but in total contradiction to his policy and wishes. During this time American colonies were taxed, in defiance of Pitt's stirring denunciation of even the theory of such practices, but even this could not call him from his morbid seclusion. He at length resigned his office. Nine months thereafter the gout reappeared and with it Pitt's intellect. He was once more buoyant, hopeful and self confident but his attack of insanity had, as Macaulay says, enabled the government formed by him to violate every principle of foreign, domestic and colonial policy dear to his heart. But for this attack of insanity the relations of the United States would never have been severed. Obviously here, as often elsewhere, gout decidedly marred the genius of its victim.

This history shows the error of assuming coincidence as a cause. Gout, arthritism and the calculous diathesis when they influence genius at all, influence for evil. The iatrophobia and the unphilosophic attitude to science of Michel Montagne were, as C. G. Cumstone²⁴ shows,

due to the gout which was a familia disorder. It at times caused anxiety states which gave birth to his rather inconsistent predilection for sorcerers or rather for the fetichism of early Egyptian science. Like Munsterberg, he wants a permanent conventionalizing ideal in science.

(TO BE CONTINUED.)

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ALCOHOLISM

BY PROF. ETTORE MARCHIAFAVA

of Rome, Italy.

(Selected with Editorial comment).

AT the International Congress on Alcoholism held in the fall of 1913, Professor Ettore Marchiafava, Physician to Pope Pius X, the following epitome of the most essential paragraphs in the Professor's interesting address, as translated from the author's manuscript by Mr. Arthur Bennington of the Press was given publicity through the medium of one of the most cosmopolitan of St. Louis' great city daily papers, the St. Louis Post-Dispatch, Dec. 14th, 1913.—Ed.

We deem it of such value as to merit a place before our many interested and discriminating readers.

When our American dailies take up themes like this and present them to the public so fully we need not fear the pathological decadence of the American people. Scientific "truth is mighty and will prevail" for the ultimate salvation of the social and political welfare of the people. The nations of the past, that have perished, did not have the enlightening and warning public free press as we have today.

Now, if His Holiness, the present Pope, would, by an encyclical to the faithful, imitate the temporal ruling powers of Europe and our own country, the brain and mind and body destroying vice which this paper so ably discusses would be placed very soon in process of extinction.

"Alcohol is a substance that receives a special treatment from the stomach, for, while water must pass out from it to be absorbed, alcohol is quickly absorbed by the blood vessels and lymphatics of the stomach and passes rapidly into the blood.

"It is interesting to note That alcohol circulates unaltered in the blood for several hours after its ingestion; that after five or six hours the alcohol decreases and vanishes, the time varying with the kind of animal and with the quality of the alcohol; that the alcohol is found not only in the blood but in many organs—liver, kidneys, brain, etc.—and in the several excretions—lymph, saliva, milk, etc.; that from 90 to 95 per cent or even more of the alcohol is burnt.

"As alcoholic drinks are introduced first into the digestive tract, it is in this that the first functional and organic changes are observed, changes that are the more grave if the alcohol be drunk upon an empty stomach. Seneca, who must have been familiar with the debauches and orgies at the court of his degenerate pupil, condemned this habit of some of the drinkers of his day. In one of his letters to Lucullus he wrote:

"Does it not seem to thee that they who drink wine when fasting, when their veins are empty, and go to eat already drunk, are acting contrary to nature?"

"An alcoholic inflammation of the stomach, the true alcoholic gastritis, has been described as hyper-acid from excess of wine and beer. The liver, that organ of which the functions are so important to the bodily economy, is most largely damaged by alcohol, some of which has to pass through it in order to enter the major circulation.

"Pathologists dispute over many questions in connection with that common malady, cirrhosis of the liver, but almost all physicians are agreed that alcoholic drinks are its principal cause. This disease diminishes the volume of the liver, increases its consistency and compresses the blood vessels.

"The, by no means rare, alcoholic cirrhosis in children and youths accustomed to drink much wine, rouses a feeling of sadness and indignation.

"In addition to the true cirrhosis of Laennec, which atrophies the liver, alcohol may also produce a hypertrophic cirrhosis without dropsy, which, as I have noticed several times, may be cured by giving up the abuse and even the use of alcohol.

"The alcohol, having penetrated the major circulation, circulates with the blood into the various territories of the system.

"While exact researches on the alternations brought about in the blood by chronic alcoholic poisoning are lacking, several investigations would seem to show that there is a diminution in the vigor of the corpuscles and in the bactericidal power.

It is no rare thing for us doctors to be consulted by middle-aged men, even intelligent and industrious men, who attribute the symptoms of hardening of the arteries to weakness of their nervous systems and continue to drink wine and spirits in generous quantities, ignorant of the fact that they are aggravating the arterial disease, which, with sobriety, might permit them to live long and be moderately active and useful in private and public life.

"Alcohol is an enemy of the arteries through its insidiously poisonous action upon the nutrition of their coats and through a mechanical action that produces sudden and abnormal variations in the arterial pressure.

"All physicians admit that diseases of the heart arise from abuse of alcohol. Alcohol alters chiefly the heart muscle and the arteries that supply this with blood.

"It is well known that in Germany, especially in Bavaria, enlargement of the heart through the enormous abuse of beer, has been observed. The pathologist, Boltzinger, called this "beerheart." Its origin is to be sought in an over supply of alcohol.

"When the heart, the most perfect motor that the world knows, because of its instant adaptability to every

need of the body, becomes enlarged, the ominous signs of weakness in that marvelous function are revealed sooner or later in the form of insufficiency. In drinkers this may appear even without hypertrophy and be the cause of death, which, according to Fahr, is to be explained by lesion of the ganglia and nerves of the heart.

"The baleful influence of chronic alcoholism and even of intoxication upon progeny is demonstrated by observations upon the fate of the children of drunkards, by the still births, and by all the malformations, deformities, mental degenerations and psychoses which are manifest in these children, and also by the now numerous experiments upon animals that have been made in Italy and elsewhere.

"The drunken mother poisons the unborn child at the very outset of its development, for the alcohol passes freely from the maternal blood to that of the embryo. The drunken mother poisons the nursing baby, for the alcohol passes into her milk. Some ignorant mothers give alcohol to babies, even to nurslings, and continue to give to children and youths. That drinkers are often the children of drinkers is a well-known fact. And for precocious criminality I recall the statistics of Garnier: 80 per cent of youthful criminals are children of drunkards.

"Alcohol is an enemy of the nervous system, especially of the brain, or at least of many brains; an enemy under the guise of a friend who brings joy, a sense of well-being, the illusion of warmth, oblivion or weariness, of need for food, of the worries of the mind.

"Whatever opinions one may hold about the use of alcoholic beverages, all should agree that for most men, mental labor, work that demands steady attention and critical sense, work that calls for assiduous precision of judgment and of action, work which involves responsibility for the lives of others and of oneself, should be performed in abstinence from any alcoholic drinks, since these make the mind less lucid, the attention less vigilant, the perceptions less keen, confusing the judgment, dulling the critical faculty, obscuring the feeling of responsibility

and duty, until they fail to notice these little things, the neglect of which even for a moment, may be the cause of irreparable damage.

"In the course of chronic alcoholism systematic deliriums, like that of jealousy, are by no means rare. In its later stages the drunkard may fall into a condition of dementia with symptoms of paralysis, with epileptic attacks, and so-called alcoholic pseudo-paralysis, that are to be distinguished from progressive paralysis due to nervousness.

"To the psychic symptoms are to be added the nervous, such as the well-known tremor, ataxia, palsy, perturbations of vision even to total blindness, epilepsy, of which there is a purely alcoholic form. etc.

"Prof. Marchiafava speaks of tremors and softenings of the corpus callosum as producing results upon the mind similar to those produced by alcohol. He also speaks of degenerative changes in the frontal lobes and the cerebellum, which augment the bountiful effects of alcohol on the brain.

"Thus far the abuse of alcohol has been considered as a direct cause of disease. Now we must add that this abuse may so affect the body as to render it more apt to contract diseases of other origin. Among these is progressive paralysis. The fact that peoples who do not use alcohol do not have progressive paralysis, and that this makes its appearance as soon as alcohol is introduced among them, as happened with the negroes and with the North American Indians, is very eloquent.

"Among the infectious diseases upon which the abuse of alcohol has the greatest influence is tuberculosis, that other great scourge of society. I remember a time in which it was believed that alcohol was antagonistic to tuberculosis, whence the generous use of alcoholic beverages by those predisposed to it, and the alcoholic 'cures' for consumption. But the facts did not agree; on the contrary, they proved that alcoholism is favorable to the pathogenic action of the specific bacillus of which, in the words of Landouzy, it is like the bed.

"The drunkard, in his life of misery, abjection and suffering, his defensive mechanism enfeebled, dyspeptic, with his blood and his tissues perpetually saturated with alcohol, is an easy prey to tubercular infection, as is the diabetic, whose blood is poisoned by too much sugar. And as in the diabetic so in the inebriate pulmonary tuberculosis is often distinguished by a rapid diffusion, a greater tendency to ulceration, hence the course of galloping consumption. This is confirmed by experience in the Umberto Hospital for Tuberculosis in Rome, where, from 1907 to 1912, out of 1780 cases of tuberculosis 32 per cent were heavy drinkers.

"The principal or, better, the most evident fact in sections of the brain is an alteration of great 'bridges,' that is, the corpus callosum and the anterior commissure. The corpus callosum runs like a principal bridge from one hemisphere to the other; it is the greatest connecting system of the human brain, linking with its fibers almost the entire cortical surface of the two hemispheres. According to recent studies, especially those of Ramon y Cajal, this bridge must not be looked upon as merely a connecting link, but rather as a route of association between the two hemispheres, for the simultaneous functions of the different zones of the cerebral cortex of each. The parts of the cerebral cortex that are left independent by the corpus callosum are joined together by the anterior commissure, which may be termed the minor bridge.

"If the abuse of alcohol were to cease upon the earth, as is the fervent hope of all of us, with it would vanish no small part of the misery and wickedness that bar the way to that speedy perfection which is the destiny of a sober, good and industrious humanity."

A NEW THEORY OF KISSING, CUNNILINGUS, AND FELLATIO.*

BY W. C. RIVERS, M.R.C.S., D.P.H.,
Barnsley, England.

THE writer first considered the idea of saliva as a lubricant in sexual acts after reading the following: "Notwithstanding all these facts, coitus may still be the chief factor in the production of genital tuberculosis. The fact was accidentally brought to my notice that many individuals—not only the Venus vulgivaga but even those in higher circles—were accustomed to smear the penial member or the vulva with saliva, in case the genitals were not well lubricated and coitus produced pain. If then the person (man or woman) contributing the saliva be affected with pulmonary consumption, infection of the virile organ or the vulva may easily be brought about by particles of the sputa which happen to be in the mouth."

And again . . .

"Von Guttecit, who has apparently enjoyed a wide experience in this class of cases (manustupration among females) especially emphasizes the fact that in these onanistic practices the saliva is very frequently made use of by either sex to lubricate the finger or other implement employed."¹

This, when one considered the similar conduct (in coitus, that is) of the lower mammals, seemed probable enough. Accordingly the ingenious generalisation of Dr. Waller,² to be next cited, came as a most interesting piece of confirmation, especially since medical textbooks had apparently no explanation of the association he mentions anything like so good as his.

* Paper invited for Erster Internationaler Kongress für Sexual-Forschung, Berlin Nov., 1914. (A meeting prevented by the European War.)

"The connection between the testes and the parotid gland is shown by 'metastatic orchitis' occurring in mumps, and 'metastatic parotitis' occurring in orchitis. (The latter is not described by authorities. W.C.R.—) A reference to the animal kingdom will make these associations less strange than appears at first sight. Animals, such as the dog, rely on the sense of smell to find the female in season, and the nose must, therefore, be reckoned as a sexual organ. When a dog finds the urine of a bitch on heat, he invariably licks it up, the process being speedily followed by profuse salivation; and the same thing occurs at the mating time, when the dog makes a very free use of his tongue. Hence, the parotid gland which secretes the watery saliva is in some measure a sexual gland."

"In animals such as the dog, under the influence of sexual excitement profuse salivation occurs. Having been a breeder of dogs I can vouch for this fact. I believe the same thing occurs in cats, in the female of which I have seen the head and neck dripping wet with the saliva of the male after mating."

Dr. Waller's evidence is all the stronger, it will be noticed, from the absence of any teleological elaboration of it. He simply records associated activity of two widely distant glands, and advances this observed physiological association as an explanation of their known pathological association; but without speculating as to the ultimate basis of the affinity.

About this time the present writer began to read contemporary sexuological text-books, coming to them to begin with in a roundabout way in the course of investigating the order of birth of consumptives, and later on in consequence of suspicions raised by perusal of some parts of Walt Whitman's "Leaves of Grass." It was a surprise, to find neither in Moll nor Ellis nor Raffalovich nor Hirschfeld anything of a discussion of the probable rationale of two of the three sexual phenomena in which the tongue is concerned, namely cunnilingus and fellatio. Let us see what these authorities have to say on the

subject. Moll,³ as also Ellis,⁴ opines that the impulse to active cunnilingus sometimes comes from a predilection for the odours of the female genitals. Raffalovich⁵ mentions the same act as one of the expedients of the impotent male, and passive fellatio as a gratification, not readily procurable from women, held out as an inducement by inverters trying to 'seduce' an hetero-sexual male, or given as a proof of their abased devotion to him. In Hirschfeld's chief work (*Die Homosexualität*) no explanation is found, nor is any advanced by previous writers.

Rosenbaum,⁶ who has given some space to the subject, treats of cunnilingus and fellatio as merely *Unzucht*. No doubt in ancient (and modern) times they frequently were (and are) venal, practiced by uncleanly and disease-tainted persons, or, with utter and anomalous lack of reference to conjugation, by sexual inverters. The allusions in the classical satirists, like Martial and Aristophanes, are generally to such practice. A later writer, Ausonius, mentions however (Epigrams 127, 128) matrimonial cunnilingus; but his tone is the same. Nevertheless, as will appear later, and as Dr. Havelock Ellis has said in a private letter, cunnilingus and fellatio, within due limits, cannot be looked upon as perversions, as being abnormal. It is remarkable, indeed, seeing that the Greek word for the former act is derived from the word for a dog, in which animal it is so commonly seen, that Aristotle has not touched upon it either in *De Generatione* or in *De Partibus Animalium*. This point, the well-nigh universal practice in mammals, will be referred to below. Meanwhile, the theory here advanced to explain the three lingual sexual acts, namely intra-buccal kissing, cunnilingus, and fellatio, might be stated at once. In main origin they are directly and manifestly utilitarian, the purpose served, besides the obvious one of excitation, being that of lubricating the genitals. Kissing probably begins as part of the *Kontrektationstrieb*. Among the sexually inexperienced it stops at contact with the skin of the lips. This truncated form of kiss has also been preserved as an expression of affec-

tion, as a greeting, a rite, and so forth. The fully developed variety is the intra-buccal, in which the tongue of the male (or, in human invert, of the more virile) is thrust into the mouth of the female (or, of the less virile); and occasionally vice-versa also. One great effect of this procedure, on both parties, but more perhaps on the male, is sialogogue, the repeated introduction of a foreign body into the mouth of course exciting the flow of saliva. Soon thereafter the mouth of the male, now well supplied with moisture, is applied to the vulva, coming to it either directly, or indirectly by way of intervening parts of the female's body. By means of the tongue the vulva is wetted within and without with saliva mixed with vaginal mucus, and the immediately circumjacent hair, pubic or other, is thus 'laid'; in any case conditions are made more favourable for penile intromission. There is also some tendency for the male to present the penis to the mouth of the female, when fellatio (but exceptionally) may occur. Coitus generally follows very soon however after the cunnilingus. As orgasm approaches, the male, even in species that do not hold the female with their jaws, may lick the part of the female which is nearest its head.

The above schema of the lingual preliminaries to coitus in manimals is, of course, not uniformly followed: different species make default in respect of different items of procedure, just as, in other spheres of animal conduct, not quite explicable variations are seen. Mention of these omissions, and the general and particular arguments for the above theory, will be most conveniently set forth by means of small disquisitions upon the acts under notice. To begin, then, with

KISSING.

The strongest evidence in favour of the sheer sexual origin of kissing is the fact that the sexual kiss has a wider distribution than the non-sexual one. So far as is known, nearly all races of mankind kiss when engaged

in coitus,* while to a considerable number of them non-sexual lip contact is unknown, being replaced in various ways. In the words of Nyrop⁷:

"Kissing is unknown in a great part of Polynesia, in Madagascar, and among many tribes in Africa, more particularly amongst those who mutilate their lips. . . . Kissing is likewise unknown amongst the Esquimaux and the people of Tierra del Fuego."

The same is true of the Malays, of the Japanese and of certain Finnish tribes. And the presumption is certainly against these peoples being ignorant, not only of kissing as a salutation, but also of sexual kissing. Lafcadio Hearn⁸ says in effect that in Japan the kiss has remained sexual, although (a point Freudians should note, for it is told of other non-mouth-saluting peoples) "mothers lip their little ones." He opines that the original primitive significance of lip-contact, or even lip-check contact, is "physiologically traceable to the love which is too often called *l'amour*, but which has little to do with the higher sense of affection." Bayard Taylor⁹ narrates of the Finns above mentioned that although the sexes freely mingle naked in the bath, and the women scrub their husbands, brothers and male friends, and while the conventional salutation is an embrace with the right arm, a kiss is considered grossly immodest and improper. Several other and similar contemporary examples of this point will be found in Havelock Ellis' already cited essay. A sentiment of the kind must have existed formerly, for Cato degraded a senator for kissing the latter's wife in daylight and in a daughter's presence. Plutarch's comment upon this affair was that in any case it is disgusting to kiss when third parties are present. Now the Romans freely practiced the mouth kiss of greeting,* even between males; hence the above personages thought a matrimonial kiss must necessarily be sexual. Clement of Alexandria exhorted married couples to refrain from kissing one another before their servants.

Another fact showing the sexual origin of the lip-contact salute is that the latter has been known to take

on distinct sexual significance. Thus the ceremonial kiss exchanged by members of the early Christian church became a scandal, and had to be confined to those of the same sex, men kissing only men, and women only women.¹⁰

That subsidiary sexual behaviour may, to borrow a Freudian term, be 'sublimated' into a symbol of friendship is illustrated (among primates, too) by a ludicrous habit of captive monkeys. The bright red fleshy callosities on monkeys' buttocks are a secondary sexual character, their display constituting a sexual attraction. But the monkey when domesticated or in captivity may use them non-sexually too, frequently turning and presenting them to the view of his keeper and other human beings with whom he is friendly.¹¹

Amongst animals, the intra-buccal kiss is well seen in stallions (the highly fed specimens of the domesticated race, at least) and also it appears, in elephants. The naturalist of authority just quoted relates (*loc. cit.* p. 71):

" as with all animals, pairing is impossible without the consent of the female, and this is never accorded until she is desirous that it should take place. As a preliminary to this, an amorous dalliance is perhaps the invariable rule among animals, and this takes many and often strange forms. The elephant affords a case in point. For the late A. H. Neumann once came upon a pair which were evidently as he says, 'love making.' Creeping upon them noiselessly, he found the male fondling his mate with his trunk, and then, standing side by side, they crossed their trunks, and put the tips thereof into each others' mouths, the elephantine form of kissing."

The 'billing' of some birds may have to do with smelling, a factor to be presently mentioned. The dove's habit, which has an appearance of love, but not of passion, of inserting the bill between another's mandibles, is probably, although poets have compared it with human intra-buccal kissing, connected rather with the way this species has of feeding its young. Neither practice is closely related in time with conjugation or attempts at conjugation, as is intra-buccal kissing.

But little of what has been said above will apply to the intra-buccal kissing of human inverts, whether male or female, for there the transposition of the sexual object must entail futility of any lubricatory function. The desire for the act persists all the same, much as the developmental impulse in an ectopic pregnancy persists—and as uselessly.

THE NOSE-SALUTATION.

Among the non-mouth saluting peoples, the commonest form of equivalent is either nose rubbing, or, chiefly among Mongolians, a complicated kind of smelling, unaccompanied by nose to nose contact. The former Darwin has described in Malays, and it is also found among some tribes of Madagascar, and indeed in many other races. The names, which nearly all mean 'to smell,' given to this custom by the various Polynesian sub-peoples have much interested ethnologists.¹¹ I have seen the practice in the North Island of New Zealand: two oldish Maori women met in the street, and with grave earnest faces steadily pressed their noses together, keeping them in contact for five seconds or so. A local acquaintance congratulated me on having witnessed this, as the custom was becoming rare. Indeed it is generally described as tending everywhere to disappear in presence of European culture, becoming replaced by 'ordinary' kissing or by handshaking. Nevertheless originally mankind was—still is to a large extent—divided in respect of facial salutation into two classes, the lip saluters and the nose saluters. Between these two forms there are the following analogies, which do not seem to have been previously pointed out. First, when practised between those of unequal station, the nose or lip, as the case may be, of the inferior is applied, not to the corresponding part of the superior, but to some other region, generally the hand. Proofs of this as regards European kissing hardly need giving. Kissing the hand of sovereigns, the feet of popes; the Spanish formula of politeness

"I kiss your hands;" the classic Greek custom of kissing the hand, breast or knee of a superior¹²; these and many other illustrations are familiar. Now, coming to the nose-salute, Williams¹³ told that on one occasion a South Sea Island chief only rubbed his nose on his (Williams') hand, *because he esteemed the missionary greater than himself*. The same writer speaks of penitent Samoans 'kissing' their chief's feet. Again, according to Roth, to smell a person's hand, "making rather a noise about it," is in Fiji a very courteous and respectful method of salutation and farewell. The second point of analogy between lip saluting and nose saluting has to do with a fact noted by Ellis (loc. cit.) and afore mentioned here, namely that in races with whom mouth kissing is otherwise solely sexual, mothers will practise it with their children. It is thus worth noting that Grandidier¹⁴ states that in Annam the nose salutation is only performed with children. Lastly, an analogue may be found to the practice of kissing one's hand to someone as a greeting. According to Grandidier, the salutation of a certain Polynesian tribe consists merely in each party touching the end of his nose with his own finger.

Can a probability of sexual origin be shown for the nose salute as for the lip salute? Affirmatively, the Mongolian olfactory kiss has certainly sexual associations, d'Enjoy¹⁵ going so far as to compare it with the sniffing of dogs which precedes coitus. It is 'strictly voluptuous,' exchanged only by married people or lovers. Then there is the statement mentioned above, namely that the Tamils rub noses during congress. If the nose rubbing in Annam is only *publicly* practiced with children, that too speaks for its sexual significance. But what the nature of the sexual significance may be is difficult to see. The odour of the face and breath can hardly differ according to sex, even to the acute olfactory sense of Asiatic and uncivilised persons. There can be no specific excitant effect, as in animals, where the smelling is directed to the genitals. Likewise there can be no lubricant action.

The sexual ingredient in sniffing the face seems of a very attenuated character.

On the other hand both face sniffing and nose rubbing are reminiscent of friendly expressions on the part of lower animals. Quite commonly the first act of dogs on meeting is to sniff each other's muzzle with every sign of amity. It is true, however, that this sniffing *a priori* is frequently followed by the same *a posteriori*. Professor Nyrop quotes (*loc. cit.*) a French writer who adds to a description of human nose rubbing the observation that cats which are fond of one another greet in this way; and that a cat belonging to him always tried to squeeze its nose against his as a mark of affection. The actual contact may well have been developed from sniffing nose to nose, a mutual position resulting from simple reciprocity, for the sense of smell is the test to which lower animals and many savages put every newly encountered object, animate or inanimate, and particularly every organic object; while the rubbing may be explained by the fact that gentle friction of the skin of the head and neck is often pleasurable. In human subjects it has been used to procure sleep; and horses may be seen to rub each other's manes with the teeth for long periods.

Seemingly, then, the nose salutation derives, if at all, from sexual procedure, then much less directly than does the mouth salutation.

CUNNILINGUS AND FELLATIO.

As most mammals are handless, coitus must be much facilitated by good lubrication of the area around the vulva, so that the penis, which can but rarely be accurately opposed to the *rima*, may glide readily on from an initial faulty position into the vulval orifice. Again, in mammals the penis approaches the dimensions of its recipient aperture more nearly than in birds, which are of course monotreme. In these the penis is perhaps relatively smaller, since it has not to serve for the passage of urine, and certainly the vent of the female is rela-

tively larger, comprising anus and vulva in one. Accordingly copulation must present more intrinsic difficulty to mammals than it does to birds. Such difficulty would be partially obviated by lubrication, in other words by cunnilingus and fellatio, practices totally absent in birds. The former must be the more effective of the two acts, because it 'lays' circumjacent hair and prevents this adhering to the *glans*. Penile lubrication alone would help less. Quite in accordance (in accordance too, of course, with the less active role of the female in sexual intercourse) is the much greater frequency of cunnilingus than of fellatio. The latter act in lower animals hardly goes beyond a slight attempt. The case Moll (l. c. s. 369) cites, where a bitch would break off coitus in order to practice it, must certainly be reckoned as he reckons it, namely as a pure perversion, since fellatio after this fashion is *hysteron proteron*, preventing instead of favouring fecundation. That also in the human race, at all events among Occidentals, cunnilingus is much the commoner act, independently of its practice by female inverts, all evidence goes to show. Thus, according to Dessoir,¹⁶ the superior Berlin prostitutes find that about a quarter of their clients desire to exercise cunnilingus, while in France and Italy the proportion is higher; Ellis adding that the number of women who find the cunnilingus agreeable is doubtless much greater. In a case history communicated to the last named author¹⁷ the statement is made regarding fellatio—"This is the only case I have known of a woman wishing to do it for the love of it." Pathological data show the same thing. Fournier,¹⁸ the noted syphilologist, taught that buccal and lingual chancres resulting from contact of these parts with infected genitals were greatly commoner in men than in women. Contagion in this way "*n'est que trop reele et formellement demontree par un grand nombre d'observations ou les aveux ont ete enregistres.*" It should just be remembered, however, that fellatio is doubtless a practice which in Europe is more affected by female prostitutes than by other

women, and that prostitutes are likely to have had syphilis, contracted in the ordinary manner, quite early in their career, and so to be protected against a second attack. The sex incidence of buccal gonorrhoea the authorities (Finger, Luys) do not seem to state; and since gonorrhoea does not confer immunity, figures bearing on this detail would be interesting. A valuable indication of the closer physiological connexion, in men than in women, that exists between the salivary and the reproductive glands, is however furnished by the theory (which deserves text-book recognition) outlined, as above cited, by Waller. The indication lies in this point, that whereas the sexes are about equally liable to mumps, orchitis or epididymo-orchitis complicates that disease very much more often than does the analogous genital involvement in the female, namely mastitis (occasionally seen, by the way, as supporters of the bisexual theory might remind us, in boys with mumps) vulvitis, vaginitis or ovaritis. There can be little doubt that the frequency of orchitis in mumps does speak for a physiological sialogenital association, or at least a parotido-genital one. For although in mumps secondary inflammations of parts other than the genitals occur (but much less frequently) and although the probable micro-organism of epidemic parotitis is said to be demonstrable in the testicle when orchitis is present, as also in the blood, yet the fact is well established that an unaccountable parotitis supervenes noticeably often upon lesions of the generative system. Paget¹⁹ found that of 101 cases of parotitis after injury or disease of the abdomen or pelvis, ten followed injury or disease of the urinary tract, eighteen the same of the alimentary canal, twenty-three of the abdominal wall, peritoneum and pelvic cellular tissue; and fifty trauma, disease or operations affecting the generative organs, twenty-seven of these being operations on the ovary. Now in view of the close relationship (lately shown by Pawlow's²⁰ work, for instance) between the salivary glands and the rest of the digestive apparatus, one could understand the possibility of disturbances of the

alimentary canal and its coverings being followed by sympathetic derangement of the parotid. Yet the above figures show that in the case of the generative system the sympathy is even closer. In passing one must note that ovarian operations are much commoner than operations on the testicle. Eustace Smith²¹ says, too, that septic parotitis in surgical practice complicates all septic operations, but especially abdominal and pelvic genito-urinary operations, puerperal infection and pyaemia. We must remember further that salivation is one of the signs of pregnancy; and in Kelly's well-known work is mentioned a case where one parotid enlarged in six successive pregnancies, and at no other time.

Again, while mumps is generally a childish ailment, the most vulnerable age being from four to fourteen years, nevertheless the orchitis in question is 'excessively rare before puberty'²² since it is likewise 'almost unknown in old age,'²³ in the male, at any rate, the connection between salivary and reproductive gland holds good only during the functional period of the latter; at the period then when the saliva would be required to help in the reproductive act. Another point of kinship between the salivary and the procreative organs is the fine sensibility of both to psychic excitation. The psychic excitation of the salivary glands, says, Pawlow, comes about through intermediation of other end organs, such as the nose, eyes and ears, which are receptors for many influences originating reflexes from a distance. Compare with this Dr. Waller's observation that sexual excitement in the dog acts as a sialogogue. The odour of the bitch's genitals, when in oestrus, certainly excites the male sexually, and this may furnish him with copious saliva for the subsequent so frequent cunnilingus, which is again followed by mounting. Thus animals of keen scent, like the dog or pig, would have no need of intra-buccal kissing as a salivary excitant, and as a fact this last phenomenon is seen in neither. In the renowned work of the Russian physiologist there is almost a suggestion of the genital function of the saliva, when he writes

(loc. cit. p. 68) "the great multiplicity of excitants of salivary secretion, has, without doubt, some connection with the comprehensive physiological functions of the saliva." In any repetition of his salivary experiments on dogs, it would be of interest to try on the male, both by buccal contact and also indirectly, the stimulus of the oestral vulval secretions of bitches.

It may be objected that the particular salivary gland which shows this sympathy with the reproductive system is the parotid, which secretes the watery element of the saliva; whereas lubrication would be best effected by mucus, the contribution not of the parotid but of the sublingual and the submaxillary. However, in mumps these latter are also sometimes involved, and in rare instances exclusively so.²¹ Moreover, the parotid is the chief salivary gland,* weighing more than twice as much as the other two together. Again, a watery fluid would act well in 'laying' the hair surrounding the female external genitals, as previously noted; while mucus is readily provided by the muciparous glands of vagina and vulva. A mixture of watery and mucoid fluids is doubtless better for lubrication than either separately, or else it is hard to see why dogs, and other animals whose spittle contains no digestive ferment, are provided with a parotid, for Starling²⁵ opines that in such the sole object of the saliva is to render the mass of food in the mouth slippery.

The overt estimation in which civilized man holds fellatio and cunnilingus, and to a less degree intrabuccal kissing, is that these acts are disgusting, uncleanly, immoral and unaesthetic. This view is merely an accentuation of his professed and inculcated outlook upon all manifestations of sexuality, and therefore probably derives from the same causes. It is here only necessary to say that in this particular case the influence of the ascetic ideal fostered by Christianity seems less operative than usual. The sculptures in the Cuttack temples, representing fellatio, are described by Hindu authors as the work of unchaste women and low persons such as eunuchs and slaves; although they admit such acts are done privately

by many.²⁶ The tone taken by other non-Christian writers, e.g. the classical satirists, has been already noticed. It was no doubt moral repugnance that made Martial lay so many strange ailments (like paralysis of the tongue, chronic pallor, foul breath) to the score of these practices, while better authorities, such as the ancient physicians, made no mention of them. It has been stated²⁷ that buccal gonorrhoea causes foul breath, but Luys²⁸ was unable to confirm the digestive disturbances described as occurring in prostitutes as the result of mutual cunnilingus, while he cites a case of habitual fellatio with no ill-effect. Obviously these acts will afford extra opportunities for the spread of tubercle and of venereal disease; but when both parties are healthy, their moderate, heterosexual, and physiological use, as in animals or savages, can hardly damage health.

But while in his conventional moral judgment the modern European views the three lingual preliminaries to coitus even more severely, even more distrustfully, than he does general sexual passion, in the matter of physical appetite there is a plain distinction. Alone of the mammals, civilized man finds, as a rule and at first sight, the genital odour of its female, and bucco-genital contact with her, not gratifying but most repulsive. Obviously a great many factors are ungeneric to both civilized man and the lower animals, and of this multitude many again may be invoked to explain the difference in taste under notice. One might just suggest in passing two—the wearing of clothing, with its masking effect upon bodily odours; and the early separation of the sexes. Yet matrimonial, physiological cunnilingus, and even fellatio, have probably always occurred; before the foundation of Nola, before the Phoenicians; although modern occidental influences are probably checking their vogue. Kokkokam, a Tamil work on love, mentions the vulva as one of the eight parts of the female body suitable for kissing, and describes six methods of practising fellatio.²⁶ That modern northern Europeans of education still perform them is likely, if from nothing else, from the

behaviour of a London theatre audience once observed. On the stage a wife was persuading her husband to some course of action; and in her eagerness (he being seated on a sofa, leaning forward pondering, with elbows on parted knees) she suddenly sat down on the floor just in front of him. It was an 'innocent' enough movement on the actress's part, but immediately she took up that posture a sudden and noticeable stillness came over the audience, the result no doubt of the close attention a suggestion of sexuality now and here arouses; especially in an assembly—affected as that is by the raised emotional tone described by students of crowd psychology. From the relative positions of the pair, and the passivity of the man, fellatio or some approach thereto, must have been the particular form of sexuality thought of.

In conclusion, the genito-lubricatory function of the saliva is not advanced as wholly accounting for intra-buccal kissing, cunnilingus, and fellatio; but it would seem a factor indispensable to their explanation, and similarly to the explanation of the orchitis of mumps.

And thus, indeed, in the narrow sector of medical knowledge proper (outside which the advice is superfluous) we may profitably remember what Semon said in 1887 of his subject, then likewise a nascent specialty:

"Die nächste Aufgabe . . . besteht darin, dem weiteren Kreise unserer Fachgenossen immer neue Beweise von dem Koennen und der Bedeutung der Laryngologie in Verbindung mit medicinischen Fragen von weiterem Interesse zu geben."

1. Cornet: Tuberculosis. Nothnagel's *Encyclopaedia of Practical Medicine*. English edn., Philadelphia, 1904. P. 205 et seq.

2. Waller: The Relationship of the Thyroid Gland to other Internal Secretions of Sexual Origin. *The Practitioner*, Aug., 1912.

Idem: Internal Secretions in the Chain of Dental Caries. *British Dental Journal* July 15, 1913.

3. Moll: *Untersuchungen ueber die Libido Sexualis*. Berlin, 1898. Bd. 1, s. 134.

4. Ellis: *Sexual Selection in Man*. Philadelphia, 1911. p. 75.

5. Raffalovich: *Uranisme et Unisexualite*. Lyons, 1896, pp. 8, 123.

Idem: *Archives d'Anthropologie Criminelle*. Sept. 1907, p. 622.

6. Rosenbaum: *Geschichte der Lustseuche im Altertume*. Zwtr. Abdk. Halle. 1845. The passage from Galen (*De simplic. medicamentorum tem.*, etc., Lib. X, C. 1.) which this writer and Moll cite in connection with cunnilingus, surely refers almost wholly to coprophagia, and the nearly equally repulsive coprotherapy of early times. The very short reference however to the Phoenician origin of cunniliogus (a conclusion given also by Rosenbaum, writing in pre-sexuological days) is interesting as showing yet again the habit of one nation to credit another with missionary work in respect to some detail of sexual conduct; indeed two peoples may mutually regard each other thus. Sexual inversion is a notorious example of this; not a good one in the present connection, however, for inversion is a mental malformation, while intra-buccal kissing, cunnilingus and fellatio are, it is hoped to show, essentially physiological.

* Recorded exceptions may be due to the recorders' non-recognition of the nature of the sexual kiss proper. Thus Ellis (*Sexual Selection in Man*, 1911. Appendix B. The Origins of the Kiss. P. 220) says that a medical correspondent in Ceylon told him that the Tamils do not kiss during coitus; the informant adding, however, that they rub noses and lick each others' mouth and tongue.' then.

7. C. Nyrop: *The Kiss and Its History*. Translation by W. F. Harvey, London, 1901, p. 178 et seq.

8. E. Bisland: *Life and Letters of Lafcadio Hearn*. Vol. II, p. 263.

9. B. Taylor: *Northern Travels*. London, 1858.

* "Suavia" kisses of passion, between the lips, "basia," of love; "oscula," friendly kisses.

10. E. B. Tylor: *ART. Salutations*. *Encyclopaedia Britannica*.

11. W. P. Pycraft: *The Courtship of Animals*. London, 1914, 2nd edition.

11. For a discussion of this see Lesson: *Les Polynesiens*. Paris, 1884. T. IV., p. 185.

12. E. B. Tylor: loc. cit.

13. Williams: *Narrative of a Missionary Voyage*, etc. London, 1840, p. 110. cit. by Ling Roth: *Journal of the Anthropological Institute*, Vol. XIX, 1890, p. 166. (In a later edition of Williams' book I do not find the passage Roth alludes to, namely, the first.)

14. A. and G. Grandidier: *Histoire de Madagascar*, Paris, MDCCCVIII, p. 20, footnotes (2) and (a).

15. P. d'Enjoy: *Bulletin de la Societe d'Anthropologie*, Paris, 1897, VIII, p. 181.

16. Dessoir: *Allgemeine Zeitschrift f. Psychiatrie*. Hft. V., 1894, cit. by Ellis: *Sex in Relation to Society*, 1910, p. 557.

17. H. Ellis: *Sexual Selection in Man*. Philadelphia, 1911, Appendix B., p. 239.

18. Fournier: *Les Chancres Extra-genitaux*, Paris, 1897, p. 18.

19. Paget: cit. by Erichsen: *Science and Art of Surgery*. 10th Edn., London, 1895, p. 606.

20. Pawlow: *The Work of the Digestive Glands*. Translated by W. Thompson 2nd English Edn., London, 1910.

21. E. Smith: *ART. Mumps*. *Allbutt's System of Medicine*. 1897, Vol. III, p. 318.

22. Osler: *Principles and Practice of Medicine*. 8th Edn., London, 1912, p. 350.

23. Choyce: *System of Surgery*, London, 1912.

24. Emmett Holt: *Diseases of Infancy and Childhood*. 6th Edn., New York, 1912, p. 965.

* Perhaps also the most active one; for according to Stewart, (*Manual of Physiology*, 6th Edn., London, 1910, p. 371) in ruminant animals the parotid never entirely ceases to secrete.

25. Starling: *Principles of Human Physiology*. London, 1912, p. 741.

26. *Marriage Ceremonies and Priapic Rites*. By a member of the Royal Asiatic Society. Privately printed, 1909, pp. 75-81.

27. V. Zeissl: *Wiener Klinik*. 1901, s. 177.

28. Luys: *Gonorrhoea and Its Complications*. Translated by A. Foerster, London, 1913, p. 230 et seq.

ATHETOSIS

(Review of the Literature with Clinical Report of a Case.)

BY HAGOP DAVIDIAN, M. D.

Washington, D. C.

THAT a well-regulated and coordinate nervous mechanism is requisite, not only to effect a normal motor discharge, but also to inhibit and control such needless impulses, is conceded. Hence any derangement or destruction in any or several parts of this system will eventuate either in the partial or total abolition of its function, or in the production of morbid or hyper-function, with the consequent paresis or paralysis, or else para- or hyper-kinesis of the innervated muscle.

The latter form, as it manifests itself in different affections, may be a pure and simple normal muscular contraction abnormally exaggerated, such as spastic contractures, which Charcot interprets as "a normal muscular tone carried to its extreme limit," while parakinesis consists of many and varied forms of adventitious movements, which are grouped by Gowers into (a) tremors, (b) rhythmic movements, and (c) irregular movements. The last group comprises such irregular and arrhythmic contractions and relaxations, implicating the muscles of different sets and functions, that move the involved parts in all directions and planes in space, some less, others for greater distance, some short, others for longer intervals of time, almost simulating the voluntary movement, yet entirely beyond the sway of volition, becoming economically useless, purposeless and often harmful. These allied forms of "mobile spasms" may take place when the muscles are at voluntary rest, or be

superimposed upon normal movements, modifying them and in turn being modified themselves.

Some of these accessory motions present definite and circumscribed features, while others are rather ill-defined, and, especially in the atypical cases, may deviate so far from the classical description of a certain type and imitate another as well, as to render the distinction hazardous, and the nosologist, to keep himself on safe ground, seeks refuge in modifying the name or compounding the two and hybridizing a new nomenclature, e. g. "Choreo-athetoid." Such border-line cases go to show, at least in certain types of abnormal motilities, stamped out as definite entities, the gradual shading of one variety of motor disturbance into another, and so serve as the intermediary links of a whole chain of apparently distinct diseases, which have been christened so merely for the reason of their certain outstanding symptom-complices; though for a rational and scientific method of titling a disease recourse should be had to the underlying etiologic and morbid-anatomic characteristics.

Therefore, *all* the motor disorders, as such do not constitute disease, but the manifestation of a syndrome, dependent upon the physiodynamic laws conditioned by the basic lesions in the course of various diseases.

The so-called athetosis, the subject-matter of this paper, is one of those specific terms having reference merely to abnormal motor phenomena, that only in the typical cases present well-marked differential features. The originator himself, aware of the inadequacy of the term, offers the following apology: "I have applied the term athetosis to the disease, having as yet had no opportunity of ascertaining by post-mortem examination the nature of the lesion to which the symptoms are due."

In 1869 Wm. Hammond of New York observed this disorder and isolated it first, out of kindred types of spasms, as a distinct malady, and published it in 1871 under the title of *athetosis*, a term coined by him, from Greek origin (Αθητισ; α=negating prefix, Τιθεναι=to place) to signify, as he expressed it, "without a fixed

position." In the years immediately following and thereafter it gained a wide reception as a sharply outlined entity, here and abroad, by a host of eminent neurologists, among whom worthy of mention are: Allbutt, Charcot, Oulmont, Erb, Gowers, Ewald, Kuessner, Hughlings Jackson, etc.

Hammond describes the condition as a "disease characterized by an inability to retain the fingers and toes in any position in which they may be placed, and by their continual motion" due "to involuntary contractions" that take place "slowly, apparently as if with deliberation and with great force. The toes are not involved to the same extent as the fingers." He also thinks that "movements appear to be due to continuous discharging lesion" of the cerebro-spinal system, that gives rise to "hyperkinesis" and consequent "hypertrophy" of the muscles.

Gowers prefers the term "the *mobile-spasm* * * * in which there is tonic spasm, slowly varying in relative degree in different muscles, and thus causing slow, irregular movements, occasionally quick, far more often slow, chiefly conspicuous in hand, and slow irregular incoordination. It is commonly conjoined with more or less permanent rigidity, which tends to fix the limb in a certain posture. * * *"

Frankl-Hochwart says "By this disease, or—more correctly—*symptom-athetosis*, we understand an abnormal and peculiar movement * * * in which the upper extremities are chiefly implicated * * * the phenomena are always conspicuous in the distal ends. In rare cases palate and tongue are also involved; these contractions are usually unilateral, occasionally bilateral."

Osler terms it a "*condition*" and gives a terse summary of the symptoms and the gist of the most prevalent opinion on the pathology. And many other authors are unanimous in their definition as to the most prominent characteristics, using different descriptive terminology to indicate the difficulty in conveying an image of the

inordinate movements that verbal portraying fails what an actual glance could easily reveal.

Strümpell defines the "movements of athetosis" as "peculiar involuntary and usually quite slow movements, which are seen especially in the arms and hands, but also in the head, trunk, etc. The fingers make slow but often very extensive movements, are extended, spread apart, flexed and moved over and around one another in the most remarkable way. This form of motor irritation occurs as a special disease, 'athetosis', or as a symptom in certain central nervous diseases, especially the cerebral paralysis of children."

Although comparatively, and fortunately, rare, yet they are by no means extremely so, as there are reported a dozen or more cases yearly, leaving us to assume scores of others that never come to light through the press.

It is asserted that no hereditary or familial morbid influences can be discerned, though Massalongo met three cases in one family, and Oppenheim has seen it once in a mother and the daughter, and on two occasions in the members of a family. Turney reports cases (of athetosis, as he thinks,) in three sisters. Athetosis in collaterals may be uncommon, but various nervous and developmental disorders in brothers and sisters, and particularly serious affections, such as tuberculosis, syphilis and alcoholism, in the parents are by no means rare.

As to age, infantile and adult forms have been recognized, but no sharp line of demarcation separates them. It is far more prevalent in the former age than in the latter. A great many cases are congenital, whether they display the athetoid motility soon after birth or at a later date, period of voluntary active motions, or "even as late as the age of 3-6 years" (Freud.) These, however, generally show one form or another of disorder, referable to the central nervous system, dating from birth. Again, special infectious diseases of childhood and several diseases of the central nervous system peculiar to children, with which athetoid movements are associated,

play the greatest role in its predominance in the earlier years of life.

Gowers explains "The frequency with which the condition follows infantile hemiplegia," because of "the greater facility with which the growing and developing nerve cells recover, and their greater susceptibility to disorder of function when their development is perverted."

Of the recently reported cases only a few state the age of the patient at the onset of the motor disorder.

Age	Number of Cases	Age	Number of Cases
1.....	3	11.....	1
2.....	1	18.....	1
3.....	2	24.....	1
4.....	2	29.....	1
5.....	2	33.....	1
6.....	3	48.....	1
7.....	2	50 +	1
8.....	1		

It is to be admitted that the total number of cases here (23) are too few to derive any conclusive results from them. But by comparison with different writers' conclusions, at which they have arrived by statistical data, there is a broad parallelism, even if they differed in minuter details.

From birth to 10 years of age—16 cases; 10 to 30 years—4 cases; 30 to 50 years—2 cases; 50 years and over—1 case. Of all the cases of athetoid disorder two thirds occurred during the first seven years of life; that is, in the first seven years it was twice as prevalent as in the subsequent years. The highest number of cases in any individual year is the first twelve months (in this series the sixth year being excepted.)

Etiologically two types of athetosis are still in favor—idiopathic and symptomatic. Symptomatic comprises the cases that are secondary to a causative factor or a disease, and are preceded or followed by, or associated with, other neuropathic manifestations, either in the sensory or the motor fields. It is said that of all the motor disorders following paralyses, athetoid movements are the

most common; commoner than tremors, choreiform or agitated types of movements.

The following are collected from both the current and staid literature as having preceded the onset of athetoid motor disorders: Developmental defects (arrest of growth or retrograde changes of the nervous system, due, among others, to parental syphilis, probably alcohol, injury to gravid uterus, maternal shock,) also premature birth, trauma to head during delivery, thrombus, embolism and hemorrhage of local vessels, focal anaemia and softening, infantile cerebral paralysis, Friedreich's ataxia, tumors, gliosis and clot (in the focus directly or in the neighborhood,) focal tubercle, localized tubercular meningo-encephalitis, measles, mumps, scarlet fever, diphtheria, smallpox, vaccinia, pneumonia, influenza, and by far, whooping cough, hyperpyrexia from any cause; also alcohol, uremia, diabetes and saturnism. Although the above have been gathered from various sources, how far they were actually responsible and each in what percentage, it is almost impossible to ascertain. Cerebral abscess is not considered to cause this type of motor disorder, but Berger reports an undoubted case.

Of the series reported in this paper, in only eighteen could the etiology be determined with reliable certainty. Number of Cases:

- 5—Congenitals: in whom some form of disease of central nervous system was apparent from birth....28%
- 4—Tumor or gliosis: in whom the first symptoms were gradually advancing athetoid movements, later associated or not with other nervous manifestations.....22%
- 6—Vascular: embolic, thrombotic, hemorrhagic and non-determinable cases with sudden onset.....33%
- 2—Whooping-cough: not known whether due to embolism, hemorrhage, or encephalitis followed by neuroglia formation.....11%
- 1—Acute illness with pulmonary localization..... 6%

The word idiopathic has almost lost its etymological meaning in the medical writings, and has come to be

recognized virtually as a synonym to obscure diseases with unknown causations. But as in other diseases, so in athetosis its boundaries have been slowly but progressively contracting and losing ground in favor of symptomatic. The more detailed information obtained concerning the case, the more thorough, gross and especially histological search is made of lesions, the less the idiopathic cases are being reported. Claye Shaw gave the first description of the idiopathic type, claiming that this type was not preceded by hemiplegia nor associated with other forms of nervous disorder, as were the reported cases heretofore (St. Bartholomews Hospital Reports, London, 1873.)

Gnauck accepts only those cases as idiopathic athetosis which are not associated with other symptoms of organic cerebral disease, unilateral or bilateral. Oppenheim says: "Idiopathic or primary athetosis is a disease usually of bilateral symmetrical distribution, apparently of spontaneous onset, and showing no relation to hemiplegia, which occurs both in children and in adults. * * * The symptoms may be the only ones present, or they may be accompanied by idiocy, epilepsy, and other affections." He is not certain, however, whether the affection is *sui generis* or a disease belonging to the category of infantile cerebral diplegia, as further on he cites the apparent recovery of a case, believed to be idiopathic, by mercurial treatment. Gowers attempts to efface the conventional delimitation between the idiopathic and the symptomatic athetoses, saying: "Such primary spasms are similar in character to that which may succeed hemiplegia, and every gradation is met with between such cases of extensive movement without rigidity, and the more frequent cases in which the movements are slighter and are combined with fixed contracture." In some cases fright, shock, agitation, trauma and chill apparently have precipitated the idiopathic type. In accordance with definitions given by neurologists of the above series, 16% were apparently idiopathic and 84% symptomatic.

Athetosis manifests itself in partial and in generalized forms. The partial form usually follows in the train, and after the fashion of localized spastic paralyses, which may be of a monoplegic or, as is the case in the majority, a hemiplegic type, hence the term *hemiaethetosis*, whether it involves the half of the body throughout, or only the upper, or very rarely, only the lower extremities, while the remainder of the half is either entirely free (in cases following monoplegia,) or more or less spastic, or displays other varieties of mobile spasms, especially tremors or choreiform movements (if it succeeds hemiplegia.)

The most common form of motor disorder that accompanies secondary athetosis is the residuals of spasticity. Although the spasticity at first may be absolute, athetoid movements do not start until "there is some return of voluntary power, not when the paralysis remains absolute." A rare but peculiar form of spasticity in these cases is what is called "tonic rigidity" (Frankl-Hochwart,) or "fixed rigidity" (Gowers,) in which extremities remain in a rigid state, resisting the passive motion until much stronger force overpowers the fixed muscles. Sinkler's case well illustrates it. In this the affected left arm remained in some odd attitude for months at a time, thus, arm adducted and pressed against thorax or extended in horizontal direction, while forearm points up vertically, later by itself changed into a different poise for another similar length of time, while in the meantime the fingers continuously were displaying characteristic athetotic motions.

Tremors are often noticed in these secondary types, either bilaterally or unilaterally, particularly on the affected limb. Other jactatory motions, entirely distinct from the athetoid type, are observed in the contralateral or the other set of the extremities, so-called "associated movements" or "consensual movements" are not uncommon.

But the most common is the association of choreiform motions in the other limb or limbs. Sometimes even the athetotic extremity does not have the pure characteristics of the motion, but a mixed phase, hence the alluded

term "Choreo-athetoid." At times these different varieties of mobile spasms interchange and succeed each other, as described in a case by Kahler and Pick; "Both fingers and toes were in the first place in rapid, ceaseless motion, later movements were extended and jerky as a typical hemichorea, finally became slow and distinctive of athetosis."

The interval between the onsets of paralyses and the athetoid movements may be months or years (Oppenheim) after a certain degree of voluntary motion returns (Putnam); that is, if the hemiplegia owes its origin to hemorrhage, the immediate shock and the pressure of extraneous substance produces complete paralysis, and by the absorption of the clot and the probable re-establishment of circulation, and especially after fibrous tissue formation, the irritation gives rise to motor disturbances. While in neoplastic formations, also if the original trauma has not been sufficient to cause paralysis, the motor disorders may precede by irritating at the initial stages until gradually extreme pressure causes paralysis. Therefore symptomatic athetosis generally follows, seldom precedes, and at times in tumors of slow or arrested growth, etc., are associated with hemiplegic symptoms throughout its course.

Among the symptomatics, in the above mentioned series, 33% started with athetoid movements, without any preceding sensory-motor disturbance; 55—60% of cases were associated with motor disturbances, such as stiffness in the legs, or weakness and paresis in the arms, tremors or choreiform movements, etc. Of the congenital cases, 5 in all, 3 displayed the abnormal movements, sometime during the first year, the fourth at the second year, and the fifth at the fourth year. Both of the latter showed neurologic abnormalities dating from birth, leaving no doubt that they were congenital. *

The sensory disturbances are also manifold. In the cases which date from childhood, sensation is always normal. A lesion of the brain in childhood seldom, if ever, causes persistent loss of sensibility (Gowers.) But in

the symptomatic form the sensory disturbances are usually present. Hemianesthesia is quite often a concomitant symptom in symptomatic athetosis. In fact, Charcot believes that "hemianesthesia is usually present at one time or another in the course of the affection." Forty-two and one-third per cent of cases experienced it, in the collection of Putnam, who adds that in a number of others no search was made; while in the series collected for this paper 45—50% constituted all sorts of sensory disturbances, such as hyper-, para-, and hyp-aesthesias, headache, pain during athetoid movements, asynergia, asteriognosis, incoordination, etc., and in one case optic atrophy with no other sensory disorder. Reflexes also exhibit some anomalies. While most of the cases in this series had normal tendon reflexes both of the upper and the lower extremities, a few had the reflexes exaggerated, more marked on the affected side, still fewer had them somewhat diminished, in one case abolished. Guilian and Dubois report a case of Double Athetosis (similar to which have been observed in other upper neurone type of motor disorders) in which Babinski reaction was obtained by the stimulation of the cutaneous surface of the entire body, with pin-prick, but not with cold or hot application. Further, stimulation above the tibio-tarsal joint on the left, and above the hip joint on the right brought out the Babinski phenomenon bilaterally (Rev. Neurologique, Paris, May 30, 1914.)

The generalized form affects bilaterally, and according to the degree of severity, it implicates the muscles of the face and neck, as well as of the trunk, therefore the clinical term *Double Athetosis*. This form was first recognized and described by Oulmont, while Allbutt has reported a case affecting all the four extremities as early as January 27, 1872. It occurs both in children and adults. Again of the above series 43 1/2% double, about 39% left, and about 17% right hemiathetoses; 90% of the double in children, leaving only 10% in the adult age.

As stated above, seeing a case is more instructive to the student than pages of description. When the case is not available, illustrations have come to aid. Photographs and sketches of deformities of hands, various poises of fingers, peculiar hyperextension of joints give some idea of the condition, but not sufficient and just conception of the malady, as the athetosis is not an object but a pathological process.

The movements are not rhythmic oscillations of a single muscle, nor alternate regular contractions of counter-acting muscles, but a compound and complicated play of different systems of muscles of the involved region, that defies verbal description. Therefore following the example of others in the study of mobile spasms, DeCastro (N. inconog. de la Salpetriere, Paris, 1912) has gotten the cinamographic reproduction of the movements, which copies, not only the motions as they go along, but their character, their varying amplitude, and their rates per second.

The muscles involved first and the most are the smaller muscles of the distal extremities (lumbricales and interossei) and of the lower half of the face, including those of the mouth. The other muscles do not altogether escape but are affected late and least. The motions of athetosis can readily be distinguished from other types of spasms, except from those of chorea. In fact in the anomalous cases distinction is almost impracticable. But the following table of differential diagnosis by Monakow brings out fairly well the main features of either condition:

HEMICHOREA.

1. Face, trunk and all extremities are attacked; in any case, all extremities.

2. The movements are active and manifold, they resemble tremor, are more marked with intended movements, and are purposeless. After short stimulation there is a brief transitory relaxation of the muscles.

3. Contracture is often absent; frequently the limbs are flaccid. No deformities are noted in the joints.

4. Hemianesthesia common.
5. Rest during sleep.
6. Intended movements and attempts to suppress the unrest increase the tremor.

HEMIATHETOSIS.

1. The forearm and hand (fingers) as well as the lower leg and foot (toes) are chiefly or solely attacked; the other parts of the body show slight paresis with increased muscular tension.

2. The movements are slow, rhythmical and hyper-extensile; there is elastic resistance; the contortions appear to be voluntary; the joints are fixed, although with varying intensity, during the movements.

3. Contracture, i. e., involuntary fixation of the joint, is common, but is subject to continuous change; there are deformities in the joints.

4. Hemianesthesia rare.

5. Rest during sleep not invariable.

6. The movements are limited by the will to only a slight extent.

Here, instead of recounting all the possible phases of the movements of a hypothetical case, it is deemed convenient to report a case of double-athetosis, at present still under observation.

George West, colored, age 32 11/12 years, single, education and occupation none. The history of the antecedents and collaterals excellent. Wassermann with father's blood negative. Patient is the first child of parents; labor lasted 4½ days, delivery difficult. The skin at birth was "green like grass." During, as well as after, delivery, child was inactive as if "still." About ten minutes after birth general convulsions set in, each lasting about 5 minutes, at intervals of 15 minutes, for five days and nights, then stopped spontaneously. Breast fed for two years or more. For the first six months child cried a great deal. At no time was there extraordinary vomiting, apparently never cerebral. As a rule child was very quiet, "lying in crib like a log," and every now and then a hand or foot began to move.

The abnormality of this motion attracted the attention of the parents, only after the child was 6 months old. He was small for his age. Nothing unusual remembered about teething. He could not sit up without propping all around, until he was 5 years old. Between five and six he could stand up with support, and about six years of age he commenced to walk. All this time he had the abnormal movements of all the extremities. Like ordinary children he learned and understood the spoken language, but never talked. When about 4-6 years old he made his wishes known by signs and signals, could carry out simple orders, differentiating the articles and colors at about 7-8. From ten years on he has been quite "intelligent and memory very good," according to father's statement, who also says that about that age he taught him the shame of exposing himself. Prior to that he was indifferent and ignorant, but up to the present there have been no evidences of involuntary emissions, masturbation, or any sexual manifestations. From the first to the tenth year he was under medical supervision with no improvement. No electrical treatment at any time. Once or twice he was taken to Johns Hopkins Clinic. Had small-pox at 6-9 months, whooping cough at 3-4 years, measles at 4-5 years of age, with no complications or sequelae.

Mental examination--On account of inability to cooperate, and want of speech no routine test could be done. He differentiates persons and places, but orientation is rather elementary, memory for faces very good. Emotionally is quite tractable and pleasant, always smiling. Occasionally shows stubbornness, also inadequately bursts into hilarious laughter. On mentioning home and parents becomes lachrymose. This certain amount of easy emotional disturbance appears to be due to mental condition and not to thalamic irritation. According to Binet-Simon scale he seems far above the idiotic age, and probably the general intelligence combines and represents the various ages of a child between five and nine, hence an imbecile.

Hammond's original case was an alcoholic and showed deterioration, not due to athetosis, but alcohol. Other similar cases are cited by Hammond and others.

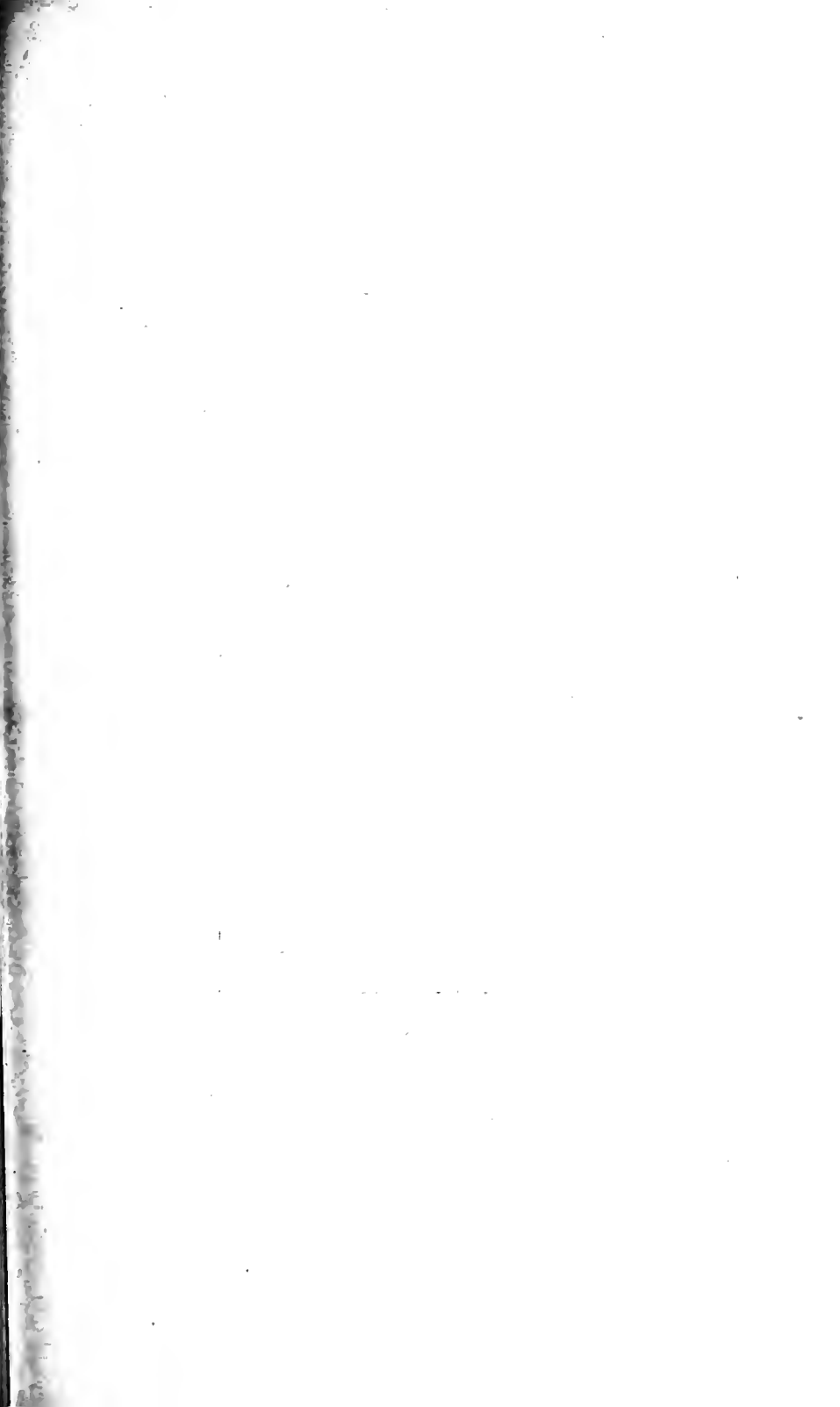
Oulmont says: "Those that date from childhood, or are congenital * * * apt to be associated with idiocy and imbecility."

"Strümpell believes the "intelligence of the patients 'suffering with idiopathic form' is sometimes, but not always, diminished."

Marie maintains that in bilateral athetosis mind remains intact. Oppenheim, while discussing cerebral infantile paralysis, says intelligence may remain quite unimpaired. Sinkler's patient of "14 years old, was fully equal to or more advanced than boys of his age" in school. But the congenital cases, though they may show no impairment in the sensory field, intellectually are far below par, while in the adult it may vary according to the underlying factors.

Physical examination—Height 57½ inches, weight 93 lbs. (stripped). Teeth ground down somewhat. Tongue rather hypertrophic. All the skeletal muscles well developed and prominent, especially hyperactive muscles. Tarsal arch obliterated. Heart's action fairly regular in rhythm and force, 96-100 per minute, during comparative quiescence. Second pulmonic slightly accentuated. Pubic and axillary hairs normal. External genitals rather large. Urinalysis negative, specific gravity 1.024. Wassermann with blood and spinal fluid in all dilutions negative; of the latter protein content increased. Cells normal. Lange's colloidal-gold reaction not characteristic of syphilis of central nervous system.

Neurological examination—No atrophies or hypertrophies, except those mentioned above. General appearance puerile. Under-developed osseous system, hypertrophied skeletal muscles and tongue. Tone of muscles rather below par. Grip comparatively weak and unsteady. On passive movement of extremities all the flexions are done readily, the extension meets a great resistance; only after some seconds do they give way gradually.





PHOTOGRAPH I.

Feet wide apart so as to be able to steady himself.

On account of defective cooperation of the patient, examination in certain respects was unsatisfactory, but tactile, pain and thermic sensations were appreciated well to all appearances. Special sensations also showed at least a fair amount of development. Audition rather impaired, vision and taste indicate nothing abnormal. There is probably some blunting of general as well as special senses, but its actual existence, the extent of deficiency, and whether the defect is in the sensory apparatus or due to general mentality of the patient it was impossible to determine.

While sitting, patient keeps the feet locked, which show some degree of varus. On standing legs wide apart so as to be able to steady himself. (See Fig. I.) Gait somewhat stiff and shuffling, with a tendency to drag the left foot. Romberg's symptom negative. Coordination of upper extremities also fair. The inability to do finer work seems to be due to his particular motor unrest. He could remove the cap of a pencil and insert it on the other end. Can place a pencil or a match behind each ear with right hand, not with left, and ordinarily he cannot button his shirt, lace his shoes or thread a needle. No tremor of tongue, fingers and other muscles. Tongue protrudes in mid line, spreads out widely, jerking forward and backward.

Reflexes—Cutaneous reflexes are present. Babinski or Oppenheim phenomenon not elicited during comparative rest or sleep. Abdominal and cremasteric normal. All the sphincters well controlled. Deep reflexes are all present to normal extent. Size of pupils moderate, round and equal, and regular in outline. React promptly to direct and consensual light reflexes. Reaction to accommodation and sympathetic could not be tested. No paralyses could be detected, but in standing and walking, particularly if patient's attention is distracted, there is a noticeable left lateral flexion of the trunk; right shoulder much higher than left. In walking patient drags the left foot. Left upper extremity also is less active. Patient can stretch out the arm or take hold of articles in a

peculiar way, but very awkward and clumsy in performing any act. He uses it less than the right. If ordered to do anything he will reach with the right; if ordered to do it with the left he will start doing it with the left, but may assist it with the right, or at least in elevating the left elbow or carrying the left arm or hand with the right hand. The above mentioned test of placing a pencil behind the ear was ultimately done with the right, but repeated attempts failed with the left hand, even arm being assisted with right hand. On active or passive motion of the muscles and joints of left side no appreciable flaccidity or spasticity can be made out, yet there seems to be some weakness of the entire left side.

But the most prominent symptom in the case is the accessory motions. During sleep they are entirely absent. In comparative rest also may be absent, especially if hands and feet are interlocked with each other, but ordinarily any casual stimulus is likely to give slight unrest to fingers and toes. But the exacerbation of the movements of these parts and progressive spreading to all the musculature is proportionate to (1) sensory (general or special) stimulation; (2) still more with psychic and emotional excitation and (3) becoming almost violent on attempt at voluntary motion. With a supreme effort of will only momentarily patient can control and restrain the abnormal movement, but during the forced restraint, it appears, the efferent impulse accumulates and as soon as it is overcharged, as if an explosion of motor discharge ensues, compensating for the total sum of motions that was due for the whole period of forced inaction. As to rate and range, the rapidity and amplitude, the movements are not uniform in all muscles. But most marked in the most distal parts of the extremities, by far, of the uppers than of the lowers. At one and the same time all the fingers are set in different directions. One or more are held in a tonic condition in extension, others in hyperextension, the remainder in various degrees of flexion. All or several are widely separated, and poised in what is called interosseal position. From this tonic

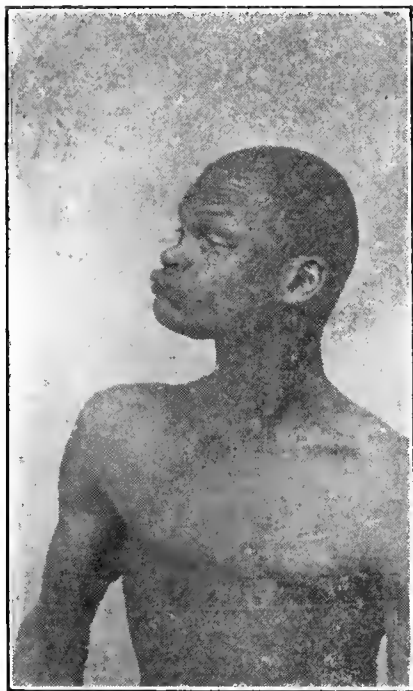


PHOTOGRAPH II.

The fingers are set in different directions. Right shoulder elevated. Body twisted. Lips open wide, draw the angle of the mouth to one side. Eye-balls directed to left and upward.

(This photograph was taken but a few seconds after the Photograph III by another camera. This phase lasted only a few seconds.)





PHOTOGRAPH III

Lips are pressed tightly and puckered. The contractions of frontales and levator-palpebrae muscles producing all possible contortions, grimaces, etc. Contraction of sterno-mastoid produces torticollis. (See also Photographs II and IV.)

state no abrupt relaxation takes place, but a slow change into an entirely different attitude. (See Fig. II.) The contraction and relaxation of each individual muscle is very much alike to the effect produced, after the stimulation of a veratrinized muscle-nerve. At times it happens that all extend or flex, or while the thumb and index finger are held in extension and the last in flexion, the intervening fingers assume different relative gradations, giving the hand a fan-like appearance. The bilateral corresponding fingers do not undergo the same motion at the same time. This is also true for the muscles of the arms and the legs, that no similar motions occur bilaterally. At times fingers intertwine, ride and roll over each other. These movements are irregular and arrhythmic, do not have the rate and amplitude of a tremor, nor the ease and the rapidity of a normal movement. The character of the movements, especially of the fingers, has given rise to numerous descriptive phrases and similes: vermicular, serpentine, writhing, cramp-like, like tentacles of polypi, ameboid, etc. All these seem to be fairly well fulfilled in the fingers of this patient. Arms are adducted and abducted, retracted and protracted, flexed and extended, at shoulder, elbow and wrist joints. Forearms pronate and supinate, displaying all the conceivable motions in all planes. During these agitations tongue is constantly churned and rolled about in the mouth, forces itself between the teeth, presses against the lips or into the cheek and smacks against the palate. It shows notable hypertrophy on protrusion. Masticatory muscles cause ruminating motions, retraction or forward protrusion of chin, perpetual gnashing and grinding of the teeth. Lips are tightly pressed or open wide, draw the angle of the mouth to one side, then the other, and pucker them alternately. The contractions of frontalis, levator palpebrae and facial muscles produce all possible expressions, contortions and grimaces, forced smiles and grins of the face. (See Fig. III.) On extreme excitation extrinsic ocular muscles give rise to occasional and transient internal strabismus. With the play of neck muscles head is

strongly arched backward, or by the contraction of opposing muscles chin is butted against the sternum, or may rotate right or left, or incline the head on right or left shoulder, or again by unilateral contraction of sternomastoids a typical but temporary torticollis is produced. (See Fig. IV. While walking the involuntary motions of the feet are not noticeable, but as soon as patient sits down and especially on attempt to resume the walk, or any other muscular action, toes start to wriggle about and show dorsal extension; also the feet, from ankle joint down, display a lateral or flexo-extensor type of unrest. The movements of toes and particularly of lower extremities, as mentioned above, are less active than those of uppers. The muscles of the trunk also contract irregularly and incoordinately, twisting the body and causing now one variety of scoliosis and now another. When a general type of motility spreads itself to lower extremities while sitting, suddenly patient is rotated to one side, and the thigh thrown out laterally, soon followed by crossing of the knee, etc.

If the patient is ordered to stand up, or turn his head to one side, or catch hold of an article, he is unable to perform it promptly. At first a sudden restraint comes on, soon followed by inordinate typical athetoid movements, and only then is he able to force himself to carry out the command, the normal motions being modified by the abnormals to give rise to irregular zigzag routes. The fingers are involved to such an extent as to be almost beyond the control of volition. It is extremely difficult to oppose the thumbs against the forefingers voluntarily. Patient picks up and takes hold of small objects, as pins and pennies, with the thumb and the middle or ring finger, sometimes with the thumb and dorsal aspect of inter-phalangeal joints, while he uses his spoon and other articles of that dimension in his palm, closing all his fingers against the handle and spoon sticking out of the ulnar edge of the hand, in which manner he usually feeds himself. During the performance of an action the involuntary motions are so aroused that



PHOTOGRAPH IV.

Tongue churned and rolled about—forces itself between the teeth, presses against the lips. Chin butted against the sternum.



PHOTOGRAPH V.

Most characteristic feature is the abnormal degree of mobility of the joints.



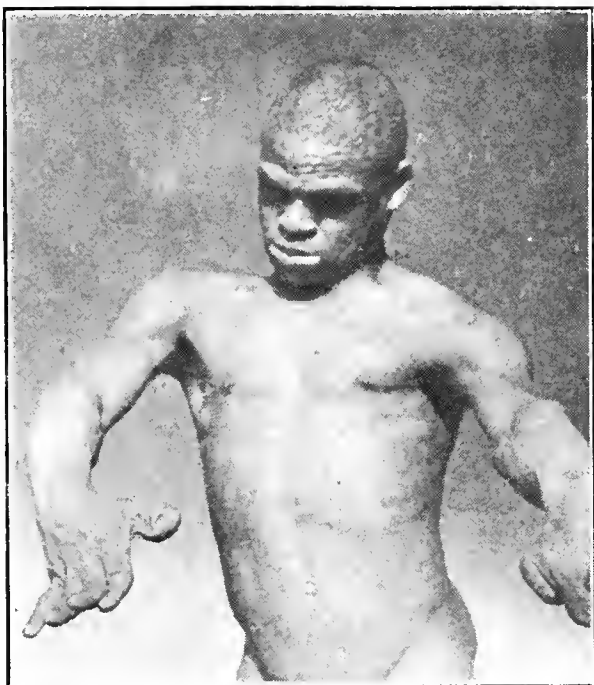
after the start of an act, to finish it is almost impossible, such as, while carrying the spoon to his mouth suddenly the hand is withdrawn but a few inches away from him, patient is unable to take it into his mouth and looks after it longingly. He is now so aware of this interference that he balances the spoon for a second or two, then with supreme force, before any opposite reaction sets in, shoves the spoon into his mouth with lightening-like rapidity. The same way with dressing and undressing, the same in using a handkerchief, he concentrates his entire will and the application of a handkerchief, blowing his nose, wiping it clean takes but a fraction of a second, then the arm, the hand and fingers are all distorted, carried away from him. He may even lose control of his fingers and drop the handkerchief. These abnormal involuntary movements, engendered by the voluntary acts of feeding or dressing, encumber and tax him so completely that patient is drenched in perspiration, heart's action mounts up to 120-130, respiration labored and makes him take deep sighing breaths, loud and repeated belching and involuntary escape of gas per viam ani are very common at the table. At the end he is completely exhausted and worn out. These motions that have been going on since birth have affected, and very naturally, certain morphologic changes. In spite of the enormous appetite of the patient the amount of adipose tissue is negligible, hands and fingers short and proportionate to the rest of the body, yet well padded and stocky. Muscles stand out well outlined and prominent. But the most characteristic feature is the abnormal degree of mobility of the joints. This is considered as characteristic, a symptom of athetosis as the involuntary movements. Metacarpo-phalangeal joints are hyperextended to produce a curve that cannot be imitated by a normal hand. Interphalangeal joints also display this to marked extent. (See Figs. V. and VI.) The cubital fossa of the elbow, especially on the left, is rotated forward and outward, decidedly, supinating the forearm, but the extreme pronation of hand at the wrist joint counterbalances it,

giving it a normal appearance at first sight. While the arm suspended on the side if the patient is ordered to turn his hands forward and outward, the dorsum of each hand can readily and completely lie against the thighs, each palm facing directly outward. During a paroxysm he can even overdo this, further rotating the palms postero-laterally. Also while the knees are extended completely thighs can be flexed over the abdomen up to right angle with the body, and abducted up to right angle with the body that ordinarily on normal persons cannot be duplicated.

The aetiological factors, enumerated above, as it is evident, are not specific that invariably and exclusively cause athetoid movements. But apparently all give rise to such changes in the nervous system that ultimately, though indirectly, bring forth this motor disorder. Therefore the mode of production of this end, by all these dissimilar and heterogeneous factors, could be resolved into several groups:

1. Developmental defects.
2. Degenerative changes.
3. Mechanical irritations.
4. Toxic irritations.
5. Miscellany.

(1) The best instances to this group are supplied by cases of infantile cerebral paralysis, to which athetosis is a frequent secondary symptom. Frankl-Hochwart says: "It is probable that prenatal defects of development play a role in the forms acquired in intra-uterine life," and enumerates, among others, such morphologic stigmata that some undoubtedly, others likely to fall into the evolutionary period; anomalies in cerebral membrane, defects in the structure, microgyria, porencephaly (Kundrat), irregularities of cerebral convolution (Dejerine-Sollier, also Oppenheim); porocrania, depression in the skull, decrease in the circumference (Peterson and Fisher and others). Further, cases revealing alike symptoms have other developmental stigmata, such as atrophy of generative organs (Lannois and Oppenheim), disalignment



PHOTOGRAPH VI.

Hands and fingers short, yet well padded and stocky. Muscles stand out well outlined and prominent. Metacarpo-phalangeal joints are hyperextended to produce a dorsal curve. Inter-phalangeal joints also display this to a marked extent.

of fingers (Fere), microphthalmia, etc. The association of athetosis and imbecility or epilepsy point strongly to the defective or arrested development of the brain.

(2) The mobile spasms are far more frequent after cerebral softening from vascular occlusion, than after cerebral haemorrhage (Med.—Chir. Trans., 1876.) Softening pervades through greater territory, and effects extensive yet incomplete damage. While in athetosis accompanying infantile cerebral paralysis it is common to find softening and cysts in the brain tissue, abscess is rare. Berger met a single instance in his review of the reported cases (Jahrbuch für psychiatrie, Bd. XXIII.)

(3) Pressure, directly or indirectly, sufficient to cause stimulation of cells or their fibres by mechanical irritation: Clot, tumors, cicatrices and neuroglia formation and "in exceptional cases compression" (Hochwart.)

(4) Toxic substances in the blood, either extraneous, such as lead alcohol, etc., or metabolic as in diabetes, uraemia or any other morbid processes that "impair the nutrition of nerve cell and alter its function" (Gowers) are likely to give rise to motor irritation.

(5) This group is reserved as a compartment for such conditions, where all doubtful and unintelligible factors could be thrown in for the time being, until a future light will either dismiss them or categorize them into one of the above groups, or provide a new and rational one. Do such causes as shock, fright, chill, agitation, etc. give rise to motor irritation and how they do so, appears as inexplicable as an idiopathic disease usually is.

The above causative factors and the process of their operation, incomplete as they may be, still less is the knowledge possessed concerning the actual size where they bear their baleful influence.

Hammond himself, without any opportunity of a post-mortem examination, and concluding from the character of the accompanying symptoms, guessed the lesion to be cerebro-spinal one. Since his observation there have been numerous autopsies.

Strümpell in a case of idiopathic, and Gordon Holmes in an infantile cerebral paralysis with secondary athetosis, found no lesion whatever macroscopically. There are reported other cases with negative findings. In these, however, it is not known whether microscopical examination also was done or not. As stated above, Oppenheim, as well as Dejenire and Sollier met cases with no lesion except convolucional irregularities. Putnam cites a report by Ewald and Kuessner of a case of paresis with athetoid movements in whom also no gross lesions were found. While the latter observers found in another case of paresis with typical athetoid type of movements, a localized lesion in the cortex of the temporal lobe.

Demange reports a case with a lesion only in the cortex, and is certain that athetoid symptoms may result from disease limited to the cortex (*Rev. de Med.*, 1883.) Boinet, and also Boncarut, found, in a case with choreo-athetoid movements, a localized meningo-encephalitis in the region of Rolandic fissure. Horseley operated on several cases of athetosis, on the corresponding cortex, and in his Linacre lecture reported one in which he demonstrated, among other things, vascular, meningeal and convolucional abnormalities, reduction in depth of cortical grey-matter, but above all histological morbid changes in the cortex of the involved area. (*Br. Med. Jour.* June 17,'09)

Also Strümpell and Beevor believe the lesion causing athetoid movements is a cortical one. On the other hand Rosenbach first observed, in cases of *tabes dorsalis* "slight involuntary and slow movements of the hands and feet," and since, others admitted seeing similar cases, proving the association of mobile spasms with lesions in the cord.

But the above reported cases, altogether, though some of them exact and accurate both gross and microscopically, constitute exceptions to hosts of other reports by numerous observers, among whom several of the above mentioned pathologists included. These tend to localize the focal

lesion producing mobile spasms in general, athetosis in particular, in the region of basal ganglia.

Without entering in detail into their various findings and consequent individual opinions, some of these cases, which presented only isolated single lesions, are collected here to obtain the ratio of the regions involved. Cortex 3%, cerebellum 2%, internal capsule 15%, lenticular nucleus (on two occasions involving caudate nucleus also) 18%, and about 62% optic thalamus. From the earliest times of post mortem examinations in the athetoid cases, opinion has strongly prevailed to attribute the pathogenic focus to optic thalamus.

Osler says: "Athetosis is the result of thalamic lesion and not of lesion of corpus striatum, as was at one time believed. Choreic movements, ataxia, and intention tremor may result from lesion in the cortical motor pathways, but athetosis does not. In several cases of athetosis recently studied microscopically, lesions of the red nucleus, the tegmentum and the vicinity have been found." Gowers, Nothnagel and Stephan incline, as the result of frequent association of hemiathetosis and hemi-chorea with localized lesions of optic thalamus, to ascribe these conditions to this ganglion. Other recent observers do not neglect the cases of pure athetosis with single circumscribed lesion outside of thalamus, and it is thought, no matter where the lesion is, the symptoms are due to the irritation of the neighboring pyramidal tract; therefore a lesion situated anywhere in the vicinity of motor tracts in the middle or posterior area of optic thalamus, lenticular nucleus, superior cerebellar peduncle, cerebellum, internal capsule, pons, bulb, or even below, under certain circumstances may produce this peculiar symptom group (Kahler and Pick.) Pineles' case proves that a lesion in the cerebellum, conditioned by some yet unknown features, gives rise to athetoid type of motor disturbance.

Charcot believes that the essential lesion will turn out to be that of centripetal fibres. Monakow affirms this view that irritation passes from thalamus and midbrain

along afferent fibres to the cortex. Anton thinks there is a counter-action between thalamus and lenticular nucleus; the thalamus originating automatic actions and lenticular nucleus checking them, and a lesion of the latter would let loose the former ganglion. Bonhoffer concludes that hemiathetosis and hemichorea are produced by focal lesions along the tract of superior cerebellar peduncle, "i. e. in the fibres which pass from the cerebellum through the superior cerebellar peduncle and the red nucleus to the thalamus and their terminations," and many others, among whom are Berger, Pineles and Oppenheim, and Gordon Holmes, sustain this view. Various theories have been formulated as to how a lesion situated in any part of this cerebello-rubro-thalamo-cortical tract gives rise to motor irritations; but all these views have their ardent adherents, opponents and modifiers. Out of all the pros and cons Oppenheim constructs the following statement:

"Post-hemiplegic motor disorders, hemichorea, and hemiathetosis are caused by direct or reflex stimulation of the automatic motor centres in the optic thalamus, therefore (1) by small, irritative foci at certain sites in the thalamus; (2) by foci which are situated in the sensory fibre bundles passing into these thalamic centres, and particularly in the cerebello-thalamic tract or the tract of the superior cerebellar peduncle; (3) especially in childhood, by morbid foci which permanently cut off the motor cortical centres and thus cause the thalamic centres to acquire an excessive independence as regards involuntary movements, which is revealed by the chorea and athetosis (especially in infantile cerebral paralysis.)"

The treatment of the athetoid movements, and by far the best, is the preventive. But preventive and symptomatic measures for pain, sleeplessness, etc., is thought to be superfluous to discuss here in detail. After the onset of the motor disorder treatment may be aimed at the central nervous system, or at the region involved.

Someone recommended suspending an iron-plate from involved arm, so by sheer weight to counteract the contractions. Another similar remedy has been recom-

mended—enveloping the athetoid limb or limbs in plaster of paris cast and leaving it so for months at a time; in limited and milder cases this latter method has shown some improvement at least. Hammond treated his original case at first with galvanic current by placing the positive along the neck, and the negative pole over the involved muscle; his result was not conclusive. His example was followed by others, with variable results. Gowers used it on a symptomatic case with hemiplegia. Gnauck also treated a patient of idiopathic type with electricity and K. Br. and both the cases were recovered. Gullain and Dubois applied pressure over the eye-balls. This first manœuvre, first used by Lesieur, Vernet and Petzetakis, had produced certain systemic effects, such as exaggeration of reflexes, polyuria, albumin- and glycosuria. And Loeper and Mlle. Weil noted nausea, astasia and syncope; further, it dispelled anxiety, distress and suffering, and vertigo, and checked such reflex acts as hiccough, yawning and sneezing. Gullain and Dubois practised this "ocular compression" on a case with double-athetosis, eliciting what is termed "oculo-cardiac reflex." Apparently this method caused the stimulation of vagus, reducing the heart's rate. Compression was applied sufficiently to effect palor, tendency to syncope, which symptoms constituted signals to stop the process. And by this means the incessant choreo-athetoid movements completely ceased during the compression. (Bull. and Mem. de Société Médicale, d'Hop. de Paris, May 14, 1914.) This initial attempt apparently neither cured nor permanently improved the disorder, but suggests a new mechanical means for further trial.

The most hopeful tactics to cope with this distressing affection, however, seems to lie along surgical lines. And we are indebted to Hammond, who not only originally discovered and described the affection, but also successfully treated his original case. He stretched the involved median nerve; some writers state that the patient was considerably improved, while others say permanently and entirely cured.

Wm. Spiller attempted a plastic method, by coupling the distal ends of the motor nerves of the involved muscles, to a nearby normal nerve trunk, with a certain amount of success. In one case he divided the ulnar and median nerves and did a lateral anastomosis of the peripheral segments of these nerves to the musculospiral nerve, and in the same patient and same arm divided both the circumflex and musculo-cutaneous, one of which was affected, the other normal, and performed an end to end anastomosis, suturing the peripheral segment of the involved nerve to the central end of the normal, and vice versa (Spiller, Frazier and Van Kaathoven, *Am. Jour. of Med. Sciences*, 1906.) The various modifications of this technique as the author proposes and especially more attempts in this line extend much hope for success. A limitation to this, however, is the type of cases that must have normal neighboring nerves to fall upon.

Media and Bossi, on several occasions, performed "a partial resection" of the involved nerves. After exposing the nerve-trunk they isolated the fibres out of the common trunk by pinching, unlike the customary electrical stimulation in delimiting the cortical areas, which tends to spread the excitation to the contiguous zones. By this means they isolated the pronator fibres, which were involved in their case, at the elbow and cut away about 5 c. m. length, half of the thickness of the nerve fascicle. They further state that after recovery, while the athetoid motions disappeared entirely, the normal voluntary movements were retained. They cite at least two successful results (*Revue Neurologique*, March 7, 1912.)

On the other hand Sir Horsley, in the case mentioned above under his name, excised the cortex, after limiting the so-called "motor" region by electrical excitation. In this case also all the adventitious motions disappeared, but at the time he made the report the voluntary motions regained, after the initial paralysis, was not complete. He states that he had arrested athetoid and clonic movements on two previous occasions by similar procedure.

All the above aims are for such cases in which the abnormal motions are limited to certain muscles or a limb. In bilateral types when almost all the muscles are involved, especially in some idiopathic cases with imbecility and epilepsy to indicate a more or less general and diffuse involvement of the brain, even surgical means give no ray of hope.

Athetosis, after all, is worth differentiating, if not as a *disease*, at least as a distinct clinical manifestation. So long as it repeats itself in typical cases with well outlined and definite features, (even though as the result of unlike causes, and in the course of different diseases) it foretells a specific and definite underlying lesion.

In conclusion—Athetosis is a motor disorder, characterized by a lesion, probably in the central ganglia or the fibres issuing from them, that, directly or indirectly, irritate the nerves of the involved muscles, giving rise to adventitious movements, that are involuntary and incoördinate, tonic and deliberate, slow, irregular and writhing; provoked by any peripheral (sensory) or psychic stimulation and highly aggravated on attempt at voluntary muscular action which becomes modified and distorted; in milder cases only, in the severer forms mostly, the distal segments of the extremities, the uppers more than the lowers, and gradually advancing centralward to involve next the head and the neck, and in most severe cases the whole skeletal musculature. As a rule the paroxysm subsides during rest, and in the majority of cases is entirely quiescent in sleep, and in consequence the morbid excess of motions produces permanent anatomic changes; such as hypertrophy of muscles, and particularly hypermobility of articulations.

SELECTIONS

NEUROSURGERY

CHOOSING THE LOCUS OPERANDI FOR INCORRIGIBLE JUVENILITY IS A PUZZLING PROPOSITION.—Trephining the cranium has lately been found effectual in one instance of arrested development but the most effectual results appear to have resulted from the practical, judicious application of King Solomon's plan of operating on the other extremity of the body. The nates receive more attention from parents than from surgeons. All depends, however, on the aspects from which the subject is viewed and the viewer.

CLINICAL NEUROLOGY

THE NUMBER AND KINDS OF BACTERIA IN CITY DUST. —“In the street dusts, *B. coli* was usually present; in the street dust an average of 51,000 per gram was found and in two samples over 100,000, while none showed less than 100. The indoor dust, on the other hand, showed an average of between 1,000 and 2,000. Acid-forming streptococci, such as are characteristic of the mouth, were present to the extent of over 1,000 per gram in three-fourths of the street samples and one-half of the indoor samples. The average for the street samples was about 40,000 per gram; for the indoor samples about 20,000 per gram. The large proportion of these organisms, particularly in the indoor dusts, appears to be significant of buccal pollution.”—Pacific Medical Journal.

Winslow and Kligler found in 107 samples of school houses, other public buildings and New York City streets, almost innumerable bacilli, especially bacillus coli and acid-forming streptococci. A large proportion were mouth pollution bacilli from indoors and streets. The precautionary hygienic significance of this is clean antiseptic floors and street sprinkling and washings, including the gutters and curbs which are too much neglected by city sprinkling carts.

THE DISCOVERY OF THE SPIROCHAETES IN THE BRAIN.—“The discovery of the spirochaete in the brains in twelve cases out of seventy by Moore and Noguchi, confirmed by further observations and by other workers,” says F. W. Mott in *Apl. Jour. of Ment. Science*, “has not only forged the last link in the chain of evidence necessary to show that syphilis is the essential cause of general paralysis and tabes, but it has made it necessary to regard the pathology of these diseases in a new light, and in future to speak of them as ‘parenchymatous syphilis.’” Noguchi later examined 200 brains from cases dying from general paralysis, and twelve spinal cords from tabes dorsalis. He has obtained positive results in 25 per cent. of the cases of general paralysis, whilst only one of the twelve cases of tabes gave a positive result. He regards general paralysis as a chronic parenchymatous encephalitis.

“Soon after Noguchi published his paper a number of observers—Berl, Jakob, Levy, Marinesco and Minea, Marie, Levaditi and Banchowski, Mott, Ranke, Schmorl, Verse—confirmed the existence of spirochaetes in the brains of paralytics. Very soon Forster and Tomaszewski, followed by Noguchi, demonstrated the presence of spirochaetes in small cylinders of brain removed during life by the Neisser-Pollak puncture method.”

This seems true beyond doubt of G. P. but we are not so sure as to tabes dorsalis.

NERVOUS SHOCK IN WAR.—W. A. Turner, Brit. Med. and N. Y. Jour. for May, distinguishes three groups of cases. In the first there is a definite type of mental shock in which the symptoms are essentially of a psychical character. In the second group there is a spinal type characterized by a limitation of the symptoms to the extremities and usually to the lower limbs. In a third group the symptoms are referred more particularly to the special senses. In this class the remarkable cases of blindness or amblyopia, deafness and deafmutism have been included. More specialized symptoms, such as stammering or hesitation of speech, local palsies and tic-like movements, have been included in a fourth group. In the more severe class of case the patient is entirely unconscious of his surroundings. All the usual tests applied with the object of arresting attention—such as throwing a bright light onto the eyes, pinching the skin, or clapping the hands close to the ears—fail to provoke a response. The deep reflexes, however, are normal or brisk, and the plantar response is of the flexor type. The pupillary light reflex is frequently impaired or lost. Urine is passed normally; swallowing is carried out usually without difficulty. There are cases of loss of memory or transitory amnesia which are admitted to the base hospitals for further observation. Deafness of a transient character is not an uncommon symptom resulting from the explosion of big shells in close proximity to the patient, while blindness or impairment of vision from the same cause is relatively infrequent. Hesitation of speech has been observed in several cases. The outstanding symptom of spinal shock is loss of power in the legs. There is observed a form of temporary “nervous breakdown” occurring in those who have been strong and well, and is ascribed to a sudden or alarming psychical cause, such as witnessing a ghastly sight or undergoing a harrassing experience. As the result of such a shock the patient becomes unduly emotional and shaky, his sleep is disturbed by bad dreams. The dreams are of experiences

through which he has passed, of shells bursting, of duels between aeroplanes. or of the many harrassing sights of the war in the trenches.

NEUROTHERAPY

AN ERROR CONCERNING CHLORAL-HYDRATE CORRECTED.—The editor of the London "Hospital" says: "The statement frequently made, that chloral hydrate depresses the heart is of very questionable value. It has lead to much timid prescribing and to the neglect of an excellent hypnotic."

Our experience of many years' practice concurs. We concede no exception, even in our early interim of country practice, where we gave it in the second stage of hard labors before the so-called twilight sleep, (a new term devised for this old labor aid) with a single preceding dose of morphia.

THE INTRACRANIAL TREATMENT OF PARETIC DEMENTIA.—(Ralph C. Hamill, M. D., Chicago, Ill., Med. Jour., March, 1915.)—In December, 1913, Marinesco and Minea reported the injection of salvarsanized serum into the subdural cavity in two cases of paretic dementia. Each case received 20 milligrams dissolved in 2 c.cm. of the patient's inactivated serum injected into one side of the skull only.—Medical Fortnightly.

THE RUM RATION IN THE ENGLISH ARMY.—Sir Victor Horsely, in more than one open letter and paper printed in several late issues of the British Medical for February, 1915, inveighs in forcible language against the continued use of the rum ration of ages past in the British army of today as now fighting on the continent. He claims that no less than 250,000 gallons of rum were sent across the channel in November of 1914, and asserts that it produces loss of moral sensibility, drunkenness, decadence,

loss of endurance, loss of efficiency in loading, aiming and firing and hitting the mark. He also claimed that out of total abstainers, it tended to make drunkards by telling the men that rum was good for them and that the surgeons had ordered it (by compulsion of the government.) The rum ration is, in his opinion, an inheritance from the days of ignorance. When ships were obliged to stand off and fire at one another at 500 feet the worst tipsified sailor could hardly fail to hit the mark, but now that they fight sea combats at miles distant, great skill is needed and the clearest hands and brains to see and to aim and to hit the mark which, in its turn, is doing its best to blow you out of the water. So, too, in the land campaigns of today, the greatest temperance and sobriety are essential to a good result against a skillful enemy.—*Maine Med. Jour.*, April, 1915.

TREATMENT OF DIABETES IN THE FIELD.—Rudiger states that many soldiers at the front have diabetes. A dietetic treatment is out of the question, for at the front there is but one diet. The medical treatment must be chiefly symptomatic, and the author knows of but three remedies—opium, bromides and salicylic acid. The first named controls the polyuria, thirst, and excretion of sugar and holds back the inevitable loss of weight. Diabetics have besides a natural tolerance towards opium. The action of the latter even persists after its withdrawal. Bromides are of use only when it is desirable to suspend the opium for a brief period—about one week. Salicylic acid in some way lessens the production of sugar in certain patients by whom it is well tolerated. As not all patients bear opium well, it may be tested as a substitute. The author does not believe in the high initial doses of opium. At most he would limit the daily dose to about two grains of the drug given in three doses. One-half or less of this amount should give the desired effect. The daily dose of bromides should be from 3 to 5 grams.—*London Lancet*.

THE STARTLING STATEMENT has been made by Dr. Katharine B. Davis, Commissioner of Corrections of New York City, that the city's crime age has dropped in a generation from 35 to 25 years. "Our sociologists," says Commissioner Davis, "are at a loss to explain this phenomenon." May not one of the factors helping to produce young criminals be the wide use of drugs? The enforcement of the anti-drug law has brought to light hundreds of victims who are suffering terribly through the cutting off of dope supplies. The average age of six wild-eyed dope fiends, who surrendered to the New York police at one time, was 28 years. An eighteen-year-old boy, a victim of the cocaine habit, was arrested on a warrant asked for by his father. One heroin victim, who died while being taken to the hospital, was only twenty years old, and it is said he had a large circle of friends of his own age addicted to the habit. Dr. Perry M. Lichtenstein, the physician of the Tombs prison, who has the treatment of drug victims on his hands, says that many drug users commit petty crimes, either stimulated by drugs or to obtain money with which to buy drugs. One of the things that all prison authorities have to contend with is the smuggling of drugs into the prisons. The strict enforcement of the anti-drug laws has left many victims in a pitiful plight.—*Leslie's*, May 13, 1915.

In this connection police neglect of children's improprieties on city streets and premises is much to blame for juvenile crime developed for later years.

STUDIES IN PROSTATIC OBSTRUCTION AND VESICAL ATONY.—In a paper by Dr. Bransford Lewis, of St. Louis, with the above title, read before the American Urological Association, June 18th, 1914, at Philadelphia, the following were the conclusions:

1. The exact causation of urinary retention should be sought for in all cases before adopting a plan for treatment.

2. It should always be found in one of two factors, viz.: (a) physical obstruction of some kind, or (b) disturbance of the nervous mechanism controlling urination.

3. There is no such thing as "unaccountable" atony or urinary retention; such a term represents an incomplete diagnosis.

4. There is no such thing as "incurable atony" except when it is caused by some nerve-degenerative process (tabes, etc.) that precludes restoration of the expulsive power; and it is unjustifiable in the most of these cases.

5. Even when the retention and atony are caused by nerve degeneration much can be done in the way of treatment, both locally and internally, to facilitate urination and improve the conditions-prevailing.

6. Where the cause is a physical obstruction, its complete removal paves the way to restoration of the expulsive power.

7. The most frequent and important of the obscure, unrecognized causes of obstruction are: (a) ill-defined contracture at the vesical neck (demonstrable sometimes only by palpation through the opened bladder or urethra); (b) unrecognized syphilis, acquired or hereditary, affecting the spinal centers.

8. Such conditions are by no means confined to adult life, and should be looked for and recognized at any age, from infancy up; diagnosed and treated in accordance with the defined diagnosis always demanded by cases of urinary obstruction.

9. Syphilis is a surprisingly frequent cause of such conditions. Lack of syphilitic history or general nerve symptoms, in obscure cases, should not preclude investigation by means of a Wassermann blood-test; and if this proves doubtful, a Wassermann test of the spinal fluid should be made, as well.

10. The supreme value of early recognition and differentiation of such cases appears in the opportunity it offers of affording appropriate treatment before the case has assumed the hopeless phases that preclude reclamation or benefit.

A final, but too-late, recognition is but poor solace for a life time of suffering due to delinquencies in diagnosis.

Some may regard the above as out of place in this Journal but local vesical trouble often accompanies and aggravates and may cause or proceed from marked neuropathic (peripheral or central) breakdown and whatever local disability may be found with neurasthenia, psychasthenia or other nervous states should be looked into and remedied and vice versa. Neuropathy and psychotherapy should not be overlooked. Ante or post operative nerve sedation and support should be invoked in all cases as well as operative procedure where indicated.

By psychotherapy here we mean the allaying of apprehension, the diminishing of pain irritability, the promotion of ample rest and sleep, etc.

It is claimed by the makers of Hagee's Cordial that medical men, for a generation, have subjected this medicine to the most exacting clinical tests, showing it to possess nutritive properties of a high order and in view of its added advantage of palatability a front place among reconstructives is claimed for Morrhuac Comp. (Hagee) for females and children.

NEUROPHYSIOLOGY

SAJOUS' RECENT COMMENTS ON THE DUCTLESS GLANDS.—Thymus: An organ of temporary functional activity, whose function it is to supply, through the agency of its lymphocytes, the excess of phosphorus in organic combination or nucleins which the body, particularly the osseous and nervous systems, requires during its development and growth.

Pancreas: Produces an internal secretion which governs carbohydrate metabolism in the organism at large, and supplies ferments which take a direct part in the protein metabolism of tissue cells and also in the defensive reactions in these cells and in the blood stream.

Adrenals: The secretion of the adrenals, while possessing a marked affinity for oxygen, inevitably reaches the pulmonary air cells where it absorbs oxygen and

becomes a constituent of hemoglobin and of the red corpuscles. It further possesses the power of dilating the bronchioles, thus increasing air-intake.

Thyroparathyroid: The secretion from these organs enhances oxidation by increasing the inflammability of the phosphorus which all cells, particularly their nuclei, contain.

All pathogenic elements in which phosphorus is present, bacteria, their toxins and endotoxins, toxic wastes, etc., are thus rendered more vulnerable to the digestive action of the plasmatic phagocytic or cellular defensive ferments.—Abstract from St. Paul Med. Jour.

DRY VEGETABLE CURE IN DIABETES MELLITUS.—M. Labbe, in Bulletin de l'Academie de Medicine for January 13, 1914, states that the oatmeal cure does not sufficiently support nitrogenous metabolism. A diet of dry vegetables yielded excellent results in the author's hands. The patient took daily ten ounces (300 grams) of vegetables, five ounces (150 grams) of butter, three to six eggs, and the same number of aleuronat or gluten rolls. A small amount of green vegetables may also be permitted, but no meat. For the ordinary dry vegetables, peas, beans and lentils—soy bean may be substituted.—Med. Fortnightly.

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This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffs are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

CONCERNING RENEWALS OF SUBSCRIPTIONS

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CHAS. H. HUGHES, M. D., Editor and Publisher.

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Editorial and Business Offices, 3858 West Pine Boul.

EDITORIAL

SURGEON GENERAL GORGAS says that General Goethals, when Governor of the Canal Zone, interfered with the sanitary work in such a way as to render it much less effective than it should and might have been. General Goethals is a great engineer. He accomplished a marvelous work in completing the canal. But he is not a sanitary engineer nor a disease expert. He should have, as the shoemaker is enjoined, stuck to his last. So says the St. Louis Star and so say we all of us physicians.

AN ORDINANCE PROVIDING FOR THE EMPLOYMENT OF MUNICIPAL VISITING TUBERCULOSIS NURSES has been drawn and presented to the City Council of Los Angeles, California, by Dr. Geo. E. Malsbary, Editor of the Southern California Practitioner, similar to that in operation in other of the principal cities of the Union, which ought to be put to work in St. Louis and with it an auxiliary ordinance compelling city sprinkling up to the curbs and with more water so as to lay the tubercle and other microbe and bacteria laden dust, even though, thereby an occasional auto may skid against the curbing. The auto and the motor cycle are not everything to be considered in our day of rapid going. We are going some in advancing sanitation and the health of sidewalk pedestrians is worthy of consideration.

WHY SHOULD SECRETARY DANIEL prohibit the use of the prophylactic venereal package which our men of the navy use on the advice of the surgeons of the navy? And how could this preventive packet tend to subvert the foundations of our moral and Christian belief? as the Secretary maintains in defense of his inhibition of this personal right and poison-dissemination preventive.

Dissolute sexually obsessed sailors have poisoned the earth with venereal disease. Women of lewd character will take the risk in every part of the world and they reciprocally spread the inoculation.

In this connection the unsanitary peril of our shore leave navies might be considered by our surgeons-general of the Army and Navy.

SINCE THIS IS A POPULAR NON-MONARCHICAL GOVERNMENT it is proper and patriotic that all parties should express themselves on matters of popular concern, especially on such subjects as pertain to the possibility of or the promotion of peace. With this view of the interests this Magazine represents—the maintenance of the right and the rights of peaceful scientists to pursue their peaceful work and purpose for humanity's welfare the world

over—we demand that Great Britain and all her allies abandon her purpose against the non-combatant people of the world only needing sustenance from food carrying vessels. The laws of humanity as to non-starvation of the underaged, the overaged and otherwise non-belligerent non-enlisted. Let the sea be free for food and raiment for the needy civilian in peace or war.

FATALITIES FROM SUDDEN MORPHIA DEPRIVATION IN CHICAGO.—Dr. Wm. D. McNally, coroner's chemist of Cook County, Ills., in correspondence to Journal American Medical Association, May 10th, 1915, found among eleven deaths attributed to morphine that seven of these fatalities resulted "indirectly from the sudden cessation of the use of morphine."

Four also died from an overdose, one also from an overdose of Wetherby's morphine cure. This shows the danger to old habits of sudden withdrawal. Old morphine takers sometimes abstain so long as they can, then resort again to the large habitual dose all at once and poison themselves. The safe way is to go back with gradually but rapidly increasing dose and then begin to reduce gradually, substituting quinine and other support in full dose, in the meantime adopting re-enforcing, amply digested nutrition and reconstruction and induced ample sleep and rest.

THE PRAYER OF MEDICINE FOR MORE LABORATORY LIGHT has been nobly answered by the Vanderbilt, Rockefeller and the more recent munificent gift of O. H. Payne of four millions to Johns-Hopkins and lesser but no less significant gifts elsewhere, so that medical men have no longer now, as heretofore, to draw upon their scanty financial resources to promote the foundation needs of the healing art beyond the clinic chamber.

But what a debt of gratitude is due to the charity and self-sacrificing medical men who from their own comparatively slender purses and inadequate time, devoted both to the founding and maintaining of colleges, labora-

tories and clinics for the sake of humanity and scientific medical progress before the public had appreciated or provided for the higher needs of medical education.

All honor to our multi-millionaire philanthropists who have heard and munificently responded to the cry of medical educational need, gloriously helped to lift this charitable burden of the centuries from the shoulders of the medical profession. They have added (in sanitary aid) more than armies would in time of war to the public weal.

The Indianapolis News and the State Medical Journal of Indiana deserve the profession's thanks and those of the people for noting anew the benefactions of these munificent scientific philanthropists and we join in the well deserved acknowledgments.

WHEN THE GREAT MALADY (War in Europe) has passed, that the life organs of civilization will begin their normal functions again (Elbert Hubbard) is the wish and hope of every lover of humanity, for much of the world is now in distress and mourning and "the rivalry of commerce is not settled by war."

ACQUITTING AN UNFROCKED DISSOLUTE INEBRIATE CLERGYMAN MURDERER on the ground of insanity and setting him free at the same trial is a judicial farce.

Murderous impulses in dissolute drunkards too often recur to justify such judicial mistrials. Society should here have the benefit of the doubt. Disease of brain that leads to murder is more liable to recur than is safe mental stability to return and stay stable in such disordered brains.

Court's verdicts of acquittal in murder trials on grounds of insanity are too often wrong by reason of inexpert, non-clinical, pseudo-psychiatric medical testimony. Brain disease impulses that lead to murder are not usually evanescent maladies. These often recur, from periodic nocturnal disease, like epilepsy at night, a recurrent

night-time malady of the brain, with substitutive paroxysmal impulses to violence and destruction, like murder or pyromania. Courts need more caution here.

DR. SHUFELDT'S (Maj. and Surg., U. S. A.) NEW BOOK, just off the press, on "The Negro Peril" will prove of intense and startling interest to all patriots.

DOCTOR SAJOURS' NEW CLINIC IN THE CHARITY HOSPITAL, Philadelphia. That useful and valuable magazine, the Nurse, and that standard medical periodical, the New York Medical Journal, thus refer to the eminent Dr. C. de E. M. Sajous' new clinic:

"The remarkable researches of Doctor Sajous on the functions of the ductless glands are well known to all medical readers. It is gratifying to know that he is to have better opportunities for continuing his studies and enlightening the world on these obscure questions. If he can find means of improving our present treatment of backward children and dementia praecox—as he is likely to do with his new facilities for observation—he will place the world under increased obligations for his untiring work in the field of his choice."

From the New York Medical Journal we take this announcement of the new clinic for Doctor Sajous' new specialty.

"Paris has an institution for the study of the diseases of the ductless glands, created and endowed by Baron Henry de Rothschild, and directed by a well-known investigator in this essentially modern line of work, Doctor Leopold-Levi. Philadelphia is also to possess in the Charity Hospital, which has been completely remodeled of late, a clinic, the first on the American continent, for the thorough study of the same class of diseases. The disorders to be studied include the following: Exophthalmic goiter or Graves' disease, myxedema, cretinism, hypothyroidism, infantilism, goiter, thyroiditis, idiocy, imbecility, backward children, microcephaly, dementia praecox, obesity, andiposis dolorosa or Dercum's disease,

adipositas cerebialis of Frohlich, adiposogenital syndrome of Launois, symmetrical adenolipomatosis and fat neck, pituitary infantilism, acromegaly, pituitary tumor, stunted growth, achondroplasia, Addison's disease, hypoadrenalism, terminal hypoadrenalism, hyperadrenalism, adrenal hematomata, hypernephroma, chronic hereditary trophoedema, enlarged thymus, status lymphaticus.

"In addition to researches upon the diseases of the ductless glands *per se*, which diseases are now in sufficient number to warrant the creation by Dr. Charles E. de M. Sajous of a new specialty he has termed hemadenology, the relations of the internal secretions to general diseases and diseases of special organs, will also be studied in conjunction with members of the hospital staff in charge of other departments.

The importance to our profession of the researches to be carried on in the new clinic at Charity is suggested by the fact that over 6000 children in Philadelphia schools are victims of backwardness, who could in many instances be greatly benefited, while dementia praecox has been regarded as the starting point of one-fourth of the cases in our insane asylums."

INORDINATE HEALTH-HARMING CITY NOISES.—One of the remarkable things of city life is the patient tolerance of health-hurting noises, especially, of unnecessary night steam whistles and the night and day rasping, scraping city tramway, iron wheeled, often flat wheeled cars, running on uneven, unlevelled, badly jointed or rather disjointed iron tracks. Our office building shakes from these street car jolts and the needless noises make conversation, while windows are open, exceedingly difficult, and conversation in the streets is almost impossible.

While we write, a contractor is repairing the chimney tops of our office building where the chimney pots and top chimney bricks have been shaken loose. The street railways have driven property owners, who desire reasonable quiet in their libraries, parlors and dining rooms, to the suburbs—only to have what were the suburbs

invaded again and again by the intolerable street cars with the same sleep-disturbing noise. There is no need of jangling chains, flat wheels, iron trucks, uneven, unjointed rails and all the racket that takes no thought of the public health or comfort, compelling the public to resort to megaphones in order to converse on our street corners.

PHYSICIAN'S TAX ANNULLED.—The section of the local license ordinance of Turlock, which imposed a tax of \$10 a day on transient physicians practising in that city, was declared unconstitutional by Superior Judge L. W. Fulkerch, April 28, when he granted a petition for the release of Dr. J. H. Berry, on a writ of habeas corpus. The proceeding held that the section was "discriminatory, prohibitive and unreasonable."

Not only that but violative of a physician's right to practice wherever called in a State and of the people's right to have him. The sick or wounded have a right to the best source of relief whether it comes from far or near.

DEATH OF DOCTOR CLOUSTON.—The London Hospital and the Journal of Mental Science record the death, last May "in Edinburgh, of Sir Thomas Clouston, M.D., late physician-superintendent of the Royal Edinburgh Mental Hospital, Morningside. Educated at Aberdeen University, he graduated M.D. in 1861, and in 1863 he was appointed superintendent of Carlisle Mental Hospital, a post which he held until he became superintendent at Morningside in 1873. The principal post of the kind in Scotland gained increased prestige during his lengthy tenure of office, owing to the way in which he negotiated the important, indeed radical, changes which were effected in mental hospital procedure and treatment during this period. He combined the rarely associated gifts of a first-rate administrator with a student's interest in science and carried out administrative reforms and scientific investigations into mental neuroses—'The Neuroses of Development' was the title of one of his publications.

To instance the thoroughness of his work in the administrative field one may recall another work of his, 'An Asylum or Hospital House, with Plans,' which reveals his appreciation of institutional problems. At one time he edited the Journal of Mental Science, and among a host of distinctions we may recall his Presidency of the Royal College of Physicians, Edinburgh, in 1902-03. He was knighted in 1911. It is to his honor that he was one of those who turned attention to the relation between environment and mental disease; and the result was a cheerfulness and diversity in every institution, indeed in every room, which was open to his influence.

THE HONOR OF THE DEGREE OF LL.D. bestowed upon the Editor of this Magazine by that worthy "Yale of the North and Central West," Grinnell College, is gratefully acknowledged, with high thankful appreciation.

This College, when it was a young Academy, at Davenport, was the school of Doctor C. H. Hughes in his youth and he has noted with pride and pleasure its growing usefulness and greatness. A great and potent destiny for the welfare of the American people, especially of this section of our country, is before Grinnell, greater than even the record of its beneficent past has been, in educational fruitfulness. Great and good men of merit for mankind have gone from its halls of learning to help the uplift of humanity.

THE HARRISON BILL.—Physicians' duty. In compliance therewith:

"Register with the Collector of Internal Revenue on or before March 1, 1915.

"Take inventory of all goods on hand coming under this Act.

"When writing prescriptions, give name and address of patient, your name in full, your address and register number.

"When dispensing, keep a record of quantity and kind of drug dispensed, name and address of patient and the date on which dispensed.

"When administering, no record need be kept.

"When purchasing, fill out order blank issued by the Internal Revenue Department, retain duplicate of order for two years from date of issue.

"Dispensing physician must register in a dual capacity, as physician and dealer.

"No prescriptions containing such drugs can be re-filled; a new prescription must be written.

"The drugs embraced in the Harrison Act are: Opium and coca leaves, their compounds, derivatives, salts and preparations, excepting 'preparations and remedies containing not more than 2 grains of opium, or more than 1/8 grain of heroin, or more than 1/4 grain of morphin, or more than 1 grain of codein, or any salt or derivative of any of them in one fluidounce, or, if a solid or semi-solid preparation, in one avordupois ounce; or to liniments, ointments, or other preparations which are prepared for external use only, except liniments, ointments and other preparations which contain cocain or any of its salts or alpha or beta eucain or any of their salts or any synthetic substitute for them' "—*Jour. Ind. State Med. Assn.*

An onerous obligation imposed on our overburdened profession and no equivalent duty imposed upon dispensing proprietary medicine manufacturers. But this law will be a deterrant of drug-habit formation.

THE UNREGRETTED SUMMER SCHOOL.—"The Republic regrets that the Board of Education is short of funds, as proven by its decision to hold no summer schools this year, but it is far from regretting the discontinuance of the summer schools. We trust that when the financial tide rises again the money may be employed in some other way. Vacation is as much the child's right as school is. The normal child longs for it with a longing that cannot be put into words. Cannot we all see ourselves in retrospect as we look at him? Those days of "gladsome idleness," when we went swimmin', picked berries, gathered wild flowers, or just lay on a hillside and watched the piled-

up clouds in the summer sky! To deprive of a full vacation the delicate child who has fallen back a little in his school work is like putting a heavier load on a beam simply because it sags. To do the same with the overgrown child who is apparently somewhat dull intellectually is to disregard Nature's own danger signals. Schools are made for children—not children for schools. The M'Choakumchild philosophy of education ignores this capital fact. The St. Louis school system, in its gratifying development of handicraft, its outdoor schools, its special schools for the deaf, the defective and the otherwise incorrigible, and its night schools which carry educational opportunity into the lives of ambitious wage workers, shows keen sensitiveness to the practical application of the principle just enunciated. In the interest of the inalienable right of every American boy and girl to "the long vacation," unvexed by pedagogues and pedagogics, we welcome the passing of the summer school. May innocuous desuetude be its changeless fate!"

The St. Louis Republic of June 1st, ult. has this timely and considerate editorial concerning the sanitary rights of the school-age kids. If more hygiene were impressed upon the minds of pedagogues and parents and people, the vacation days of summer time would not be thought of for the housing of children for school tasks and confinement in school.

The Republic writes like an alienist and neurologist on this subject, for the care of the human mind (of children,) as Grotius wrote, is the noblest branch of medicine.

ECCENTRICITY VS. INSANITY.—A plea of eccentricity was lately made in the Probate Court of St. Louis where some legitimate mature children disinherited in a mother's will, because the mother considered the children were unfilial, whereas the mother appears to have held only a morbid aversion, the result of a previous unrecovered insanity, the recurring morbid antipathy being similar to that held by her towards her husband, (later deceased,) when she was first insane.

The testatrix had been previously treated for insanity and placed under the care of an experienced alienist, in a private sanitarium for insane women. The lady's physical health was bad and her disease involved her brain in disorder to such an extent that she took an unreasonable aversion and unjustifiable dislike towards her husband. She was taken out of the sanitarium before being recovered.

Insanity is a peculiar change of character caused by disease, disordering the brain and mind, not natural to the individual.

True eccentricity, on the contrary, is a natural and noticeable peculiarity of mind, not due to disease implicating the brain, but inherent in the character. It is a natural state. Insanity is a disease-caused condition of changed peculiarity of speech or conduct or both, involving brain and mind.

Eccentricity is as natural to the brain as an always existing falsetto voice is to the larynx, as compared with the changed voice which results from disease of larynx or vocal cords, or as natural dumbness or inability to speak as compared with disease-caused aphasia or aphonia.

Medical dictionaries are generally not plain and explicit enough in the distinctive differentiation between mental eccentricity and insanity. The miser and the spendthrift are presented by Hack-Tuke as contrasting forms of eccentricity as well as folie du doute.

This dictionary, by the way, gives the most elaborate discussion of any lexicon extant, to our knowledge, and we may at a more opportune time, if space and opportunity should permit, discuss it.

We are tempted even now, as the vision of Doctor Johnson touching the palings as he passed in absent-minded meditation, returning to touch one he might have missed, to write at length on the important subject. But other demands forbid.

AN INTERNATIONAL COMMISSIO DE LUNATICO ENQUIRENDO for Europe would seem to be a need of the present, to ascertain the sanity of the contending belligerent crowned heads across the ocean.

But who among the maddened monarchs of the enlightened and civilized Europe engaged in the war, might be qualified as sane enough to sit on such a commission? *Dementia belli* seems to be all pervading over there among the combatants.

THE IMPEACHMENT OF DR. C. R. WOODSON, of St. Joseph, Mo., after he had been elected President of the Missouri State Medical Association, on the ground that he had announced on his card in brackets (nervous diseases) instead of the code formula: "Practice limited to nervous diseases" was simply ridiculous. We are glad to see this erroneous decision of the council reversed. Such peccadillo decisions smack too much of petty tyranny, especially when done by a minority of the entire council and without the confirmation of a majority of the entire Society.

We believe in strict professional ethics but in so grave a matter, we are also for fair play and reasonable fraternal consideration.

NOT CLINICALLY CORRECT BUT STARTLINGLY UNTRUE.—Under the caption, "Sleep Unessential to Life or Health" the Associated Press dispatches from the San Francisco meeting of the American Medical Association the sanitarily and clinically erroneous statement, attributing it to a Kansas City neurologist.

"San Francisco, June 21.—Sleep is not as essential to life or even health, as is generally believed, according to a Kansas City neurologist, who was among a number of delegates to the American Medical Association convention here that occupied pulpits yesterday in San Francisco churches.

" 'The loss of sleep,' Dr. R——— asserted, 'has never caused anyone to become insane. Victims of insomnia,' he continued, 'are likely to develop a morbid fear of insanity. Re-education of the mind is the most successful method,' he said, 'of restoring those suffering from such fear.' "

This is misdirected, injudicious unenlightenment for

the public, without foundation. In fact Shakespeare and other non-medical writers who knew the world at large knew better. The mother of the new-born babe knows better as she cradles her infant in sleep the early weeks of its post partum life. Every insane hospital physician or nurse knows how essential much sleep is to the recovery of the insane and the prevention of relapses and neuroses.

It is the loss of sleep and consequent lack of recuperative rest that in the main causes the fear of insanity.

An exhausted, sleep-deprived brain is not in condition to be successfully re-educated out of morbid fears. Chemical, electrical and environmental rest with satisfactorily tranquilizing surroundings are the best preliminary therapeutics for obstinate insomnia. The tired insomniac brain is not especially receptive to psychic suggestion of re-education or to any other suggestion of self-control effort.

HARRY THAW AGAIN FREE.—After nine years of lawful restraint as a legally pronounced insane murderer, Harry Thaw is again at liberty. Though not positively and actively insane now, Thaw is, as he was before the murder of Stanford White, an insanoid with insanity latent in his make-up, requiring only suitable exciting cause and a return to the same viciously self-indulgent, unrestrained life, such as he led before the tragedy, to bring a possible renewal of active insane display.

Men with vicious alcoholic, inadequately restful and untranquilizing habits, provocative of brain instability, ought not to be free from rationally restraining brain and mind surveillance and legal guardianship.

Any brain and mind so organically unstable, whether judicially sane or insane, that yields to inadequately provoked brain-storms, to the extent of unjustifiable murder, should be kept under restraint, personal or by proxy, for life.

When proven potentiality of murder is in the unstable organism or abnormal make-up of an individual, only an exciting, unrestrainable impulse or brain-storm to over-

master self-control is needed to cause murder or other grave outbreak. All the life before such a person should be guarded from excitation to mental explosion, vicious indulgences in sensual passion and alcohol. There is no surety for a sane life for such henceforth, without abstention from damaging self-sensual indulgence, yet Thaw says he will never drink intemperately again. Men of his make-up cannot drink at all and be safe from relapse. Absolute sobriety and a physiologically reformed life is their only possible hope.

If leaking bottles are refilled they will leak again and it is wise to be cautious about trusting the once insanely exploded brain and mind. This country has a superabundance of weak erratic brains and minds at large and fit for serious psychic crime, on slight inadequate excitation.

IN MEMORIAM

SIR WILLIAM R. GOWERS, M. D., of London, England, our eminent and well beloved friend, author, writer and lecturer on diseases of the nervous system, died on May the 4th, at the age of 70 years. He was consulting physician to the University College Hospital, in London, and to the National Hospital for the Paralyzed and Epileptic. His treatise on the diseases of the nervous system and his ability as a neurologist were recognized throughout the world and especially esteemed in America.

CORRESPONDENCE

ACUTE HEROIN POISONING AND THE HARRISON LAW.—On the evening of April 16th, 1915, a man applied at the office of the Superintendent of the Peoria State Hospital and asked for admission to the institution as a voluntary patient. He gave his history as being a morphine habitue and said he had been taking cocain and heroin in large doses and begged for a "shot." He evidently was under the influence of liquor as his breath denoted. He begged so hard for "dope" that he was given a hypo tablet containing 1/8 grain of heroin to relieve him of the withdrawal symptoms from which he was suffering. The patient crumpled the tablet in his

palm and snuffed it up his nose. He sat down again and within ten minutes was drowsy. He rapidly became cyanosed and in a short time was unconscious. He was immediately transferred to the hospital. He was given 1/30th of a grain of strychnine sulphate and 1/50th of a grain of atropin sulphate. The writer saw him at 6:45 P. M. at which time his pulse was 146 and his respiration was 7 per minute. Artificial respiration was instituted and continued for five minutes at the rate of 20 per minute. Alternate hot and cold packs were applied to chest, abdomen and limbs. The patient was intensely cyanotic, he was given aromatic spirits of ammonia inhalations and at 7 P. M. his pulse was 132 and his respirations had increased to 12 per minute. These, however, were very superficial in character. The treatment, including packs and inhalations, continued and at 7:15 his pulse was 120 and respirations 17 per minute.

At 7:30, Pulse was 120, Respirations 22.

At 8:00, Pulse was 108, Respirations 22.

At 10:00, Pulse was 100, Respirations 18.

The patient was seen the next morning at 8:00 A. M., and his pulse was 72 and respirations 18. He was conscious and told a very different story than when admitted. He said he was a heavy drinker and that the day before he had mixed his drinks freely and since he was drunk and had been bothered with a left inguinal hernia, he decided he would like to have it relieved. A bartender told him he could gain admittance to this place as a voluntary patient if he would pretend he was a "dope-fiend." He denied using drugs to any great extent since, as he says, all drunkards use "dope" to some extent sooner or later. He gets on sprees every two or three months, lasting several weeks. His demeanor was certainly that of a morphine habitue and if he is not addicted to drug using, his powers of imitation are excellent. He has no doubt learned a lesson and will never again imitate such a condition, especially since it came so nearly costing his life.—Fred'k. Cansey, B. S., M. D., Peoria State Hospital.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

OLIVER WENDELL HOLMES' Priority Concerning Septic Infection in Puerperal Fever, Erysipelas and Simple Peritonitis.

An interesting contribution by Dr. Henry Swartz of St. Louis before the St. Louis Medical Society, showing Dr. Holmes' priority of this important discovery as to child bed-fever contagion. We take pleasure in putting this matter on record again in this Magazine.

HOLMES 1843

Holmes in 1843 made the following recommendations:

"A physician holding himself in readiness to attend cases of midwifery should never take any active part in the post-mortem examination of cases of puerperal fever.

"If a physician is present at such autopsies, he should use thorough ablution, change every article of dress, and allow twenty-four hours or more to elapse before attending to any case of midwifery. It might be well to extend the same caution to cases of simple peritonitis.

"Similar precautions should be taken after the autopsy of surgical treatment of cases of erysipelas, if the physician is obliged to unite such offices with his obstetrical duties, which is in the highest degree inexpedient.

"On the occurrence of a single case of puerperal fever in his practice, the physician is bound to consider the next female he attends in labor, unless some weeks at least have elapsed, as in danger of being infected by him, and it is his duty to take every precaution to diminish her risk of disease and death.

"If within a short period two cases of puerperal fever happen close to each other, in the practice of the same physician, the disease not existing or prevailing

in the neighborhood, he would do wisely to relinquish his obstetrical practice for at least a month, and endeavor to free himself by every available means from any noxious influence he may carry about with him.

SEMMELWEIS 1847, FOUR YEARS LATER

“‘In 1847, Semmelweis, then an assistant in the Vienna Lying-in Hospital, began a careful inquiry into the causes of the frightful mortality attending labor in that institution, as compared with the small number of women succumbing to puerperal infection when delivered in their own homes. As a result of his observations, he concluded that the morbid process was essentially a wound infection, and was due to the introduction of septic material by the examining finger. Acting upon this idea, he issued stringent orders that the physicians, students, and midwives should disinfect their hands with chlorine water before examining parturient women. In spite of almost immediate surprising results,—the mortality falling from 10 to about 1%—, his work was scoffed at by many of the most prominent men of his time, and his discovery remained unappreciated until the influence of Lister’s teachings and the development of bacteriology had brought about a revolution in the treatment of wounds.’

“‘To this should be added, says Swartz, that since that time Hungary, the native country of Semmelweis, has honored his memory by having his ashes removed from Vienna and deposited in an honor-grave, which the city of Budapest gave for that purpose; that this grave is graced by a suitable monument; that a tablet has been placed on the house in which Semmelweis was born; that a grand Semmelweis-monument has been erected on one of the finest public squares of Budapest; that the means for this monument have been brought together by international subscriptions; that the unveiling of the monument took place on September 30th, 1906, and was the occasion of a great international gathering of obstetricians; that the final report, of how the medical profession

of Hungary has honored itself by honoring Semmelweis, was presented last fall to all the members of the gynecological section of the international congress of Budapest, in the hope that they might carry the fame of Semmelweis over land and sea.

"In the meantime the medical profession of the United States has almost forgotten that Oliver Wendell Holmes has equal, if not greater, claim to be remembered as the discoverer of the nature of puerperal infection. A great many of our teachers of obstetrics have been educated abroad, and all of them have been influenced by German obstetrical literature, and thus it happens, that most of them forget in their text-books to mention the epoch-making essay of Oliver Wendell Holmes.

"It is pleasing to note one exception to this rule; Barton Cooke Hirst, the present professor of obstetrics in the University of Pennsylvania, in the latest edition of his text-book, gives Holmes due credit for his great discovery."

Dr. Holmes' views are more lengthy, together with his defense against the doubting assaults of Hodge and others of his day. His defence appears in Holmes' complete works and even more fully vindicate his priority. In the field of meritorious life-saving priority let us zealously chronicle and guard our own honored pioneers in discovery. We should ever cherish and defend our great and good, in the cause of humanity, as well as those of the rest of the world. Place a monument to his memory and one to Ephraim McDowell in Washington.

"LABORATORY WEEK" for Visiting Physicians at the Research Laboratories of Parke, Davis and Company, Detroit, Mich., was held June Seventh to Eleventh, Nineteen Hundred and Fifteen.

"Laboratory Week Lectures:

Introductory Address—E. M. Houghton, Ph. G., M. D., Director Biological and Research Laboratories.

Scientific Research, the Basis of Pharmaceutical Progress—Dr. J. M. Francis, Chief Chemist.

Immunity—N. S. Ferry, Ph. B., M. D.

Chemistry and Application of the Coal-Tar Disinfectants—H. C. Hamilton, M. S.

Actively Immunizing Agents—N. S. Ferry, Ph. B., M. D.

Ozena—H. C. Ward, M. S.

Serum Therapy—W. E. King, A. M., M. D.

Organo Therapy—Carey Pratt McCord, A.B., M. D.

Spirochaetal Diseases—F. W. Baeslack, A. M., M. D.

Glandular Syndromes—Carey Pratt McCord, A. B., M. D.

Anaphylaxis and Serum Sickness—N. S. Ferry, Ph. B., M. D.

The Cancer Problem—F. W. Baeslack, A. M., M. D.

Tuberculins—A. W. Lescobier, M. D.

Sero Diagnosis—F. W. Baeslack, A. M., M. D.

Protective Enzymes—Carey Pratt McCord, A.B., M.D.

Autogenous Vaccines—N. S. Ferry, Ph. B., M. D.

The Propagation of Experimental Animals and Maintenance of Large Animals for Biological Purposes—R. H. Wilson, D. V. M.

“Laboratory Week” Demonstrations:

Sero-Enzyme Tests for Pregnancy, Syphilis and Tuberculosis—H. S. Ward, M. S.

Anatomical Specimens of Glands of Internal Secretion—Carey Pratt McCord, A. B., M. D.

Rat Sarcomata, Spirochaeta Pallida and Trypanosomes—F. W. Baeslack, A. M., M. D.

Filterable Viruses—W. E. King, A. M., M. D.

Pharmacological Action of Drugs—R. C. Hamilton, M. S. L. W. Rowe, B. S.

Sterilization with the Ultraviolet Ray—L. Davis, S.M.

Rabies—L. T. Clark, B. S.

Luetin—F. W. Baeslack, A. M., M. D.

The Propagation of Experimental Animals—R. H. Wilson, D. V. M.

These demonstrations display actual work in progress, with a comprehensive exposition of the apparatus and technique employed in advanced medical research.

Opening Session, Monday, 9:30 A. M., June 7, 1915.

This is an elaborate showing of the work of this well-known firm. The program reads like a Medical College announcement of its biological department. It is a good plan for our well-meaning proprietary friends to get close to the profession in this way and show what they are doing and how they are doing it. On a former occasion we have visited the laboratory of Parke, Davis & Co. and derived information and satisfaction from the visit.

DESTITUTION AND DISEASE IN SERBIA.—Report of the Rockefeller Foundation for the Relief of Suffering Non-Combatants in Europe.

The Rockefeller Foundation War Relief Commission—sent to Europe to recommend the most effective methods of relieving the needs of non-combatants—has reported concerning conditions in Serbia.

Acting upon this report, the Foundation has joined with the American Red Cross in sending to Europe a Sanitary Commission to help Serbia control the present epidemic of typhus and the threatened epidemic of cholera.

Essential portions of the War Relief Commission's report on conditions in Serbia are published herein.

This report and plea for aid comes to us late. No one appears to have shown great philanthropic interest concerning this war impoverished country when the plea went out for relief of Belgium. Why?

The Serbians are Christians and a worthy people. They are mostly small land and homestead owners, frugal and upright. Serbia suffered much in the previous Turkish and second Balkan war and has now one-fifth of her two and a half million men of fighting age, mobilized and eighty thousand of them already either killed or wounded.

Her peace dealings having mostly been with Austria are now cut off by her war with the latter country.

The commissioner's impression is that Serbia's distribution has reached a condition in which it has nothing

to give to its own unfortunates and her epidemic of deadly typhus adds to the force of charity's plea in her behalf.

Doctors take notice, consider and respond accordingly to offices 61 Broadway, New York City.

WHAT TO DO WITH THE SUB-NORMAL CHILD.—The Seventh of a Series of Monographs on the Improvement of the Human Plant. Henry Smith Williams, M. D., LL.D., Editor. Issued by Luther Burbank Society, Santa Rosa, California.

The author considers heredity is more of a factor in human life than in plant life—more of a menace—more of a hope. And nothing in the world of living things responds so quickly to new environments as the human mind—child and adult.

CURSCHMANN-BURR TEXT BOOK ON NERVOUS DISEASES.—The New Book on Neurology. By G. Aschaffenburg, Cologne; H. Curschmann, Mayence; R. Finkelnburg, Bonn. R. Gaupp, Tübingen; C. Hirsch, Göttingen; Fr. Jamin, Erlangen; J. Ibrahim, Munich; Fedo Krause, Berlin; M. Lewandowsky, Berlin; H. Leipmann, Berlin; L. R. Müller, Augsburg; H. Schlesinger, Vienna; S. Schoenborn, Heidelberg; H. Starck, Karlsruhe; H. Steinert, Leipsic. Authorized English edition edited by Charles W. Burr, B. S., M. D., Professor of Mental Diseases in the University of Pennsylvania; Neurologist to the Philadelphia General Hospital. With 156 text illustrations in two volumes. Price twelve dollars net for the set. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut St.

"The German contributors to this book should need no introduction to American physicians, as they are all men of established reputation. The articles are based on personal knowledge and experience and each writer presents his own well thought out and mature opinions."

The work is purely scientific in tone and conservative in attitude. The translators have endeavored to do their work faithfully.

At this particular time in the history of Europe, when war and its alarms occupy so many of the best medical minds over the sea, it is particularly fortunate that the enterprising publishing house of Blakiston's Son & Co., and Professor C. W. Burr should have bethought themselves to offer to the English and American medical profession this elaborate, interesting and up-to-date reproduction of German neurological and psychological literature. Until the present unfortunate war, involving so many men of eminence and merit in medical literature, now in the ranks of war, shall have ceased, these volumes present almost the last words from over there, where the fields of medical science have been illustriously adorned by the eminent names whose works are here translated and submitted for our consideration and enlightenment. Some at least of these eminent authors' names may be memorial before the present European war shall have ended and every appreciative admirer of advanced German medical literature should have these great books in his library.

THIRTY SECOND ANNUAL REPORT OF THE STATE
BOARD OF HEALTH AND BUREAU OF VITAL STATISTICS
OF MISSOURI, 1914-1915.

This interesting, valuable report is full of statistical information interesting to physicians, sanitariums and the public generally obtained with much diligence and due consideration for the public interest and presented for its welfare.

It gives statistics of tuberculosis, cancer, etc., and indicates by a valuable map, locations of the mortality of the latter. Pellagra is considered, also the eruptive fevers.

The cause, control and statistics of cancer are recorded and will appear elsewhere in this magazine.

Scarlet fever, whooping cough and poliomyelitis are not overlooked. In fact the statistics of nosological medicine have not been slighted in this report. This entire report displays an exceptional appreciation of the

information needs of the intelligent practicing physicians of the State, even to the inclusion of the pneumonia, enteric affections, visceral diseases, accidents, suicides and homicides.

The number of still-births recorded is rather large for so live a State as Missouri.

Not the least interesting feature of this interesting report is the handsome and intelligent facial expressions of the group of the members of this Board which adorn the initial page of this valuable report. There is no frown nor dullard among them. They are as good looking and confidence-inspiring as the work of their combined brains here before us manifests in merit and confirms our previously entertained confidence in our Excellent Governor's ability to judiciously select his subordinate public servants. And this is always a commendable feature in a State's Chief Executive.

IN MEMORIAM.—Elliston P. Morris deceased on the 3rd day of twelfth month, 1914, in his 84th year. Became a Manager in 1858 of the Friend's Hospital of Philadelphia. He served for 26 years before any of the now remaining Managers were appointed. His term of service of 56 years is the longest on record for this or any other similar hospital. Samuel B. Morris, the father of Elliston P. Morris, served as a Manager from 1834 to 1842, and his son, Samuel Morris, was a Manager for 45 years, from 1857 to 1902.

During the period that Elliston P. Morris served as Manager he saw many changes in the methods of treating the insane, and he was interested at all times to further measures that would improve the conditions or increase the comforts of those committed to the care of the Asylum. Owing to impaired health, he has not been able to be present at the monthly meetings of the Managers, since third month, 1913, but a letter written to the Board six days before his death, expressing his views on a certain proposed action, gave evidence of his continued interest in the affairs of the Asylum.

The foregoing is from the minutes of a Stated Meeting of the Board of Managers held Twelfth Month, 7th day, 1914, and is a high and just tribute to the industrious and devoted fidelity of a great and glorious cause—the care and welfare of the insane.

Similar silent, meritorious, though not so long, service, has been and is being given to the welfare of the insane, in this United States since Pinel struck the shackles from the chained lunatics of Bicetre and Chiarugi and the Tukes and Yorks recognized them as children of affliction and not as fiends incarnate and transformed the name of Bedlam into that of Hospital.

VOLUME IX PUBLICATIONS OF THE AMERICAN SOCIOLOGICAL SOCIETY is before us and exceedingly interesting reading, especially the contribution of Henry Schofield of Northwestern University Law School on "Freedom of the Press in the United States," a theme which must command the attention and concern of every editor and publisher in our free speech and free press country. But all of the contributions of this valuable volume, contributed as they all are by eminent and forcible writers (mostly mature educators), appeal to the highest sentiments of American philanthropic patriotism and cultured intelligence. They all concern the important subjects of "Freedom of communication," which, like the right of petition, should be held to be sacred in this "land of the free" (and we hope of the brave enough to protest every phase of the tyrannies manifesting themselves in our free speech and free press Republic.) We hope to see this good, patriotic Society increased and its publications extensively read.

President Ross on "Freedom of Communication and the Struggle for the Right" is masterly and patriotically American in tenor and text and spirit.

Henry Pritchett's contribution on "Reasonable Restrictions Upon the Scholar's Freedom" and the discussion will interest all concerned in teaching, no doubt as it has the writer hereof. All the writers and disputants being eminent scholars of merit, nothing seems unworthy of

meritorious consideration in this excellent volume of transactions. We commend it and its predecessors to all students of American Sociology.

THE COMMERCIAL LURE OF A SCIENTIFIC PHYSIOLOGICAL PHILOSOPHY.—Preliminary to a commendation of Pepto-Mangan (Gude) for anaemic palor, etc., as a consequence of school fatigue and confinement, our proprietary friend of Pepto-Mangan fame, gives the medical profession the following sage observation and advice:

"The Delicate School Girl.—Even the most robust and generally healthy children show the deleterious results of the modern system of educational 'forcing' that prevails in most of our larger cities. The child that starts the school year in excellent physical condition, after the freedom and fresh air of the summer vacation, in many instances, becomes nervous, fidgety, and more or less anemic, as the term progresses, as the combined result of mental strain and physical confinement in overheated, poorly ventilated school rooms. How much more likely is such a result in the case of the delicate, high-strung, sensitively organized, adolescent girl? It is certainly a great mistake to allow such a girl to continue under high mental pressure, at the expense of her physical health and well being, and every available means should be resorted to to conserve the vitality and prevent a nervous breakdown. Regularity of meals, plenty of sleep, out-of-door exercise without fatigue, open windows at night and plenty of nutritious food, should all be supplied. Just as soon as an anemic pallor is noticeable, it is a good plan to order Pepto-Mangan (Gude)."

FULLER'S ANATOMICAL MODELS OF THE BRAIN, PONS AND MEDULLA—By Dr. William Fuller of Grand Rapids, Michigan, Graduate of McGill University, Demonstrator of Anatomy, etc., are the best, most accurate and serviceable for the study and demonstration of the cerebrum,

cerebellum, medulla oblongata, pons varolii and upper spinal cord, extant.

No teacher or student of this region of the human body should be without them. They cannot be excelled or even equaled anywhere. We exhibited them at several foreign international congresses, including Petrograd (then called St. Petersburg,) at Paris, Copenhagen and Spain. Savants in neurology and psychiatry there pronounced them a marvel of anatomo-expert mechanical genius, especially Dr. Fuller's thirty-two-section hinged brain slides for interior brain study and demonstration purposes. No teacher of brain anatomy and brain function should be without this wonderful model and marvel of anatomical knowledge and genius. Dr. Fuller's book on anatomy accompanying these great models and casts is equally valuable.

APPLIED EUGENICS.—By Sanger Brown, M. D., Chicago. From *American Journal of Insanity*.

What Sanger Brown writes is worth reading and this is his conclusion:

"As a general proposition, it will be conceded that the school is by far the most practical agency which may be depended on to insure a widespread diffusion of knowledge; however, since pupils naturally and properly discuss among themselves the topics taught them, it follows, logically, that a topic which should not be so discussed should not be given a place in the authorized list of subjects to be presented.

"To impart to the young opportunely correct information on various aspects of sexuality is the province of parents and guardians. Such an intimate acquaintance with the temperament, tendencies, and perhaps critical experiences of the young person as a parent or guardian is in the best position to gain, is highly essential in reaching a decision as to the time, place, and nature of the required precepts.

"Let correction proceed along the line of urging parents to seriously study and duly meet these important

obligations; let us not, however, hastily and rudely molest our most precious and venerated possessions; rather let them be carefully reviewed and gently re-adjusted, if need be, to meet the march of genuine enlightenment."

AMERICAN PUBLIC HEALTH PROBLEMS—Panama- Pacific Exposition, Memorial publications of the Prudential Insurance Company of America, 1915.

Many valuable statistical mortality records are given in this report. We have not space for the analysis the report deserves but it is interesting to note, from the tables herein, the exemption of the negro from cancer, the preponderance with him of certain other diseases and of accidents.

The death rate records and elements of mortality are especially interesting to physicians and it is especially pleasing to note the marked decrease in this regard in the just past century, showing a decrease in deaths per thousand of nearly forty per cent in comparison—a good exhibit of the profession's efforts and the popular appreciation of sanitation and hygiene.

These thirty-two charts are inclusive of every important phase of modern public health activities. They are all the result of original investigations. They represent in brief outline the changes in the American death rate during variable periods of times, including a historical review of the mortality of four large cities during the past one hundred years. The original data for the large majority of the charts are derived from the official health reports of American states and cities.

GREAT MEN AND HOW THEY ARE PRODUCED. By Casper L. Redfield. This mooted question is discussed by Redfield in favor of the offspring of late marriages who are the product of the children who are issues of conjugal unions beyond the third generation. The author maintains that superior stock is the result of slow breeding and that rapid breeding necessarily results in producing an inferior stock.

He contends that four generations of offspring in a century is too many for sound parts and greatness and gives examples from history of historic greatness resulting chiefly from older matrimonial unions.

He thinks the educational periods should not be prolonged beyond the early twenties.

He takes issue with Prof. R. H. Johnson of Pittsburgh, as the latter records himself in the March, 1914, *Journal of Heredity*.

This monograph is interesting reading. He thinks four generations to a century instead of three or less will tend to national degeneracy or rather national mediocrity and inefficiency.

TWO PERILS TO GOOD GOVERNMENT is from the pen of Henry Watterson of the Louisville Courier Journal attacking the woman's rights movement and alcoholic prohibition, with the usual specious personal liberty plea, a plea that would permit all sorts of vicious conduct, violative of the proprieties, and allow many of the present day health, comfort and general welfare movements of social life, to run riot and rampant without legal inhibition.

Its personal application would annul the Harrison anti-narcotic law, prohibit the prevention of self-poison or other forms of suicide, self-harm, etc. We are surprised to see such sophistry emanate from so concededly an intellectual source, in political circles. His argument for free liquor would admit the claims of woman to the suffrage, which he opposes.

SIXTEENTH ANNUAL REPORT OF THE BOARD OF EDUCATION, St. Louis, Mo., year ending 1914, full of valuable information. It is gratifying to see the open air school and garden play work for children favored and the sanitary aspects of education duly regarded.

Superintendent Blewett's contribution to this report is worthy of special consideration. He is the right man for the right place.

The prominence given to the history and geography of Missouri and, as promised for future courses of instruction, is a pleasing and profitable feature and everything that aims to eliminate the "dry as dust," monotonous and unattractive should, so far as practicable, be eliminated. It is hoped some day that object teaching through the popular "movie" may soon come into vogue for illustrative purposes, in our public schools.

REPORT TO THE GOVERNOR ON THE INSTITUTIONS FOR THE INSANE of the State of West Virginia.—By Carlos F. MacDonald, A. M., M. D. (of New York) 1914.

This is a well written report from a proper and competent source of alienistic, clinical and executive experience containing recommendations for the construction, arrangement and government of such hospitals, the qualifications of physicians for their right treatment, nursing and care of patients as generally approved by the best psychiatrists. The suggestions of this report should be favorably acted upon for the welfare of all inmates and the profit of all states, wherever such conditions do not now exist. It is profitable as well as humane to rightly care for and minister to minds diseased.

IN THE SAINT PAUL MEDICAL JOURNAL for April and May, Dr. John Knott's articles on the Fatal Illness of Napoleon the Great ought not to be overlooked by any reader of the *Alienist and Neurologist*.

The Methodist Episcopal Church and Wine of Cardui (editorial) in the May number will likewise interest any physician who discountenances quackery in religious high places. This always interesting monthly medical periodical has much other good matter, some of which we abstract from Sajous, Ritchie, Kline and Plondke on the prostate. Shuman's "mistaken gastric ulcer diagnosis" will interest our surgical readers and so will Paronis lingual tonsilitis.

INFANTILE PARALYSIS IN MASSACHUSETTS in 1909. Board of Health Report by Robert W. Lovett, M. D. Infantile Paralysis as Observed in Health District No. 15, during 1909, by Lyman A. Jones, M. D. Methods of Treatment in Infantile Paralysis, by E. H. Bradford, M.D., Robert W. Lovett, M. D., E. G. Brackett, M. D., Augustus Thorndike, M. D., Robert Soutter, M. D., Robert B. Osgood, M. D. The Diagnosis of Infantile Paralysis in the Prodromal and Early Acute Stage, as Found in the Experimental Study of Acute Poliomyelitis in Monkeys. With Report of Findings in Four Human Cases. By William P. Lucas, M. D. Reprinted from the Monthly Bulletin of the Massachusetts State Board of Health for June, 1910.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—Third Series, Volume the Thirty-sixth. These transactions are always interesting and instructive to the medical profession, coming as they do from the oldest center of medical education in our country and a center still of up-to-date advance.

The chief attractions of this volume, aside from its strictly scientific medical communications, are its several splendid memorial tributes to that Corypheus in neurology Dr. S. Weir Mitchell, and the presentation of the portrait, through Lady Osler, of her distinguished husband, Prof. Wm. Osler, Regius Professor of Medicine in Oxford, formerly our fellow citizen.

AMERICA'S GREATEST PROBLEM: THE NEGRO.—Dr. R. W. Shufeldt's latest book. Major, Medical Corps, U. S. Army. Fully illustrated with fifty highly interesting half-tone engravings. Royal octavo, 377 pages. Special pattern cloth. Price, \$2.50. Is certain to arouse a vigorous nation-wide discussion.

It is a wonderfully startling book. We endorse all the publishers say of the merits of this timely, remarkable book. For over thirty years the author has been a diligent first-hand student of the negro problem, and is especially well qualified as a scientist to write this long-needed work.

SOME IMPORTANT MEMORANDA.—Compiled from recognized authorities by Fellow's Compound Hypophosphites Co., for the medical profession, embracing important chemical tests and signs, including Abderhalden ferment tests, Osler's spots, etc. All useful for ready reference to any practicing physician especially the country doctor at a distance from his home library, concluding with a detail of the virtues and dosage of the hypophosphites, have come to our review table, presented in convenient form for saddle bags or coat pocket and free to physicians for the asking.

SECOND ANNUAL REPORT OF THE STATE CHARITIES COMMISSION to the Governor of Illinois, Springfield, Ills. These reports are always interesting and well worth the attention of physicians and philanthropists and especially to the people of Illinois. We regret that we have not more space in our pages for abstracts from this and similar reports and the many excellent hospital reports from this and other States, several hundred of which come to us each year.

THE UNIVERSITY OF MISSOURI BULLETIN, Volume 16, Number 6, Journalism Series 9, gives an exceedingly interesting account of the world's journalism, by its able editor, Walter Williams, Dean of the School of Journalism, University of Missouri, summarising the editor's observation on a world tour made in visiting two thousand newspaper offices, June 13th, 1913 to May 14, 1914. You will miss much valuable information if you do not read it. Editor Williams sees things and records them right.

THE MEDICAL ORGANIZATION OF STATE HOSPITALS FOR THE INSANE—How New York has systematized the medical care and treatment of her dependant insane. By William Mabon, M. D., Superintendent and Medical Director, Manhattan State Hospital, Ward's Island, N. Y. Contributions like this from such competent sources of

experience should be spread among the members of the medical profession, legislators and people.

PROCEEDINGS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION at the Seventieth Annual Meeting held in Baltimore, Md., May 26-29, 1914. Published by American Medico-Psychological Association. Always interesting and instructive. Should be generally read by general physicians as well as those within the specialty and so should all reports from the hospitals for the insane.

A PLEA FOR SIMPLIFIED LABORATORY REPORTS FOR HOSPITALS.—Single sheet for all forms has advantages of safety from loss and less bulky character of case records. By Howard T. Child, M. D., Pathologist, Kankakee State Hospital, Kankakee, Illinois.—Reprinted from *The Modern Hospital*, July, 1915.

AN EARTHQUAKE OF ONE MINUTE'S DURATION, Friday at 1:30 P. M., Feb. 10th, 1914 is also recorded in same report. No damage. Other matters in this Report, especially causes of death in the insane, as well as in the other hospital reports of 1914, are of interest, but we have not space to record them. The profession, however, generally gets them or should get them direct.

AMERICA'S PRESSING MORTALITY PROBLEM.—Extraordinary Increase in the Death Rate from Organic Disease of the Heart and Other Hard Worked Organs, as Indicated by the Mortality Records. Urgent Need of Action. By E. E. Rittenhouse, President Life Extension Institute, Inc. A public address (condensed) prepared at the request of the Committee on Public Health Education of the Medical Society of the County of New York, and delivered at the Academy of Medicine, February 2, 1915.

AMERICA'S LEADERSHIP FOR PEACE, by Lucia Ames Mead, is a plea for a defenseless Army and Navy.

This might be considered a natural stand for a woman to take, though she appears quite pugnacious in the divorce courts. George Washington, however, has answered this pamphlet in advance, having advised: "In time of Peace prepare for War."

MICROPHOTOGRAPHIC STUDY OF THE TUBERCLE BACILLUS.—By Wm. J. Manning, M. D., Medical Officer, U. S. Government Printing Office, Washington, D. C. Showing a detailed enlargement of the organism approximating 4,000 diameters. Panama-Pacific Exposition. From New York Medical Times.

LOSS OF VITREOUS IN THE INTRACAPSULAR CATARACT OPERATION AND ITS PREVENTION.—Read at Meeting of Am. Acad. of Ophth., etc., Boston, October, 1914. Reprinted from Archives of Ophthalmology, January, 1915. By W. A. Fisher, M. D., Chicago, Ills. Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College.

LES FUGUES DE L'ENFANCE—INFLUENCE DES MILIEUX SCOLAIRES ET FAMILIAUX.—Par R. Benon, interne de la Clinique des maladies mentales et P. Froissart, ancien interne de l'Infirmierie speciale de la Prefecture de police. Extrait des Annales D'Hygiene Publique et de Medecine Legale. Paris.

TWELVE CONSECUTIVE INTRACAPSULAR CATARACT OPERATIONS AND THEIR VISUAL RESULTS.—Read before the Chicago Ophthalmological Society, November 16, 1914. Reprinted from Ophthalmology, January, 1915. By W. A. Fisher, M. D., Chicago, Ills. Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College.

AREQUIPA SANATORIUM (Bothin Convalescent Home Inc. Foundation.) For the Treatment of Early Cases of Tuberculosis in Wage Earning Women. Fairfax, Marin County, California. First Annual Report, Sept. 1, 1912.

THE ADVANTAGES OF MEDICAL ASSOCIATIONS.—By Edward C. Register, M. D., Charlotte, N. C. Editor of the Charlotte Medical Journal; President of the Charlotte Sanatorium; Ex-President North Carolina Medical Society, etc. From the Medical Record.

A convincing address from a meritorious source, ably presented.

THE TREATMENT OF SENILE CATARACT BY THE GENERAL PRACTITIONER.—Read before Illinois State Medical Society, May, 1914. Reprinted from Illinois Medical Journal, November, 1914. By W. A. Fisher, M. D., Chicago, Ills. Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College.

PSYCHIC THERAPY, CLINICAL PSYCHOLOGY, AND THE LAYMAN INVASION.—By J. Victor Haberman, A. B., M. D., D. M., (Berlin.), New York. Instructor in Clinical Psychology and Psychotherapy at the College of Physicians and Surgeons, Columbia University, etc. From the Medical Record.

A CASE OF INFANTILE UTERUS APPENDAGES WITH RESULT OF TREATMENT.—Henry R. Elliott, M. D., Washington, D. C., Associate Professor of Physiology, George Washington University Department of Medicine. From Journal of American Medical Association.

ONE HUNDRED AND SEVENTEEN CASES OF INFANTILE DIARRHEA Treated by Intestinal Implantation of the *Bacillus Lactis Bulgaricus*.—Ralph Oakley Clock, M. D. From Journal of American Medical Association.

An enlightening contribution on a psycho-clinical subject from a competent source of psychiatric clinical experience, especially valuable reading for the general practitioner of medicine as well as the alienist and neurologist.

INSANITIES OF THE PUERPERAL STATE—F. W. Langdon, Prof. Psychiatry, University of Cincinnati and Superintendent Cincinnati Sanitarium. From *The Lancet-Clinic*, March 13, 1915.

MENTAL OBLIQUITIES—HOW CAUSED AND HOW REMEDIED is the Eighth of this Series of Monographs on the Improvement of the Human Plant by the same author and from the same source of publication.

DR. MACDONALD'S HOUSE, Central Valley, Orange County, N. Y., is an attractive place, well managed. But there are others for knowledge of which see our advertising pages.

NARCOTIC DRUG ADDICTION.—By George E. Pettey, M. D., Memphis. From the *New York Medical Journal* for February 27th, 1915. A timely contribution on a timely subject for medical and popular concern.

ACUTE INSULAR SCLEROSIS AND ITS CONCOMITANT VISUAL DISTURBANCES.—Foster Kennedy, M. D., F. R. S. (Edin.), New York. From *The Journal of American Medical Association*.

STATISTICS OF PUBLIC, SOCIETY, AND SCHOOL LIBRARIES.—Having 5,000 Volumes and Over in 1908. United States Bureau of Education, Bulletin 1909, No. 5, Washington.

WHERE IS THE FUNDUS OF THE BLADDER?—Bransford Lewis, B. Sc., M. D., St. Louis. Read before the American Urological Association, at Boston, April 16, 1913.—Reprinted from *Jour. A. M. A.*

CHOKED TO DEATH BY TEETH, upper plate found on autopsy far back in throat is reported from St. Lawrence State Hospital, Ogdenburg, N. Y.

HEREDITARY SYPHILIS in Connection with Clinical Psychology and Psychopathology. By same author. From Jour. A. M. A.

THE NORTH POLE AFTERMATH.—Speech of Hon. S. D. Fess, of Ohio, in the House of Representatives, Congress of the United States.

SPINA BIFIDA.—An Experimental and Clinical Study. By Norman Sharpe, M. D., of New York. From Annals of Surgery.

THIRTY-NINTH ANNUAL REPORT of the Managers and Officers of the New Jersey State Hospital at Morris Plains. For the Year Ending October 31st, 1914.

COMMON FACTORS IN MENTAL HEALTH AND ILLNESS.—By Dr. F. Lyman Wells. From The Popular Science Monthly, December, 1914.

ICTUS, EPILEPSIE-JACKSONIENNE ET ASTHENO-MANIE.—Par les Drs. R. Benon et P. Bonvallet, Saint-Jacques, Nantes. Extrait des Annales Medico-Psychologiques.

HOBSON'S ARGUMENTS FOR PROHIBITION AND AN ADEQUATE NAVY which comes in the same mail are far more plausible.

THE SCHICK TEST, ILLUSTRATED for Determining Susceptibility to Diphtheria and the Need of Prophylactic Injections of Antitoxin.

MULFORD'S LUETIN REACTION for the Diagnosis of Syphilis.

MERCURIALIZED SERUM, (MULFORD) for the Intradural Treatment of Cerebrospinal Syphilis.

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NO. 4.

MODESTY AMONG THE NORTH AMERICAN INDIANS.

BY R. W. SHUFELDT, M. D.,

Major, Medical Corps U. S. Army, (ret.)

Washington, D. C.

MANY opportunities of the most varied kinds have been afforded me to study a number of the tribes of the Indians in this country, within the confines of civilization, as well as for much longer periods in the regions where they reside. So close have been my relations with them on various occasions that little or no difficulty was experienced in observing their most intimate sexual customs and their views of morality.

One of the best chapters that has ever been published on the subject of the evolution of modesty is the thoroughly classical one that occurs in one of the Parts of Dr. Havelock Ellis's "Studies of the Psychology of Sex," a work known to every student of the subject the world over. But in that volume, in the chapter treating of modesty, there are less than two dozen lines devoted to the consideration of this all-important psychical secondary sexual character as it is exemplified among the aborigines of North America, north of the Mexican boundary. A part of the information in question consists simply of a quotation from Professor Otis T. Mason's "Woman's Share in Primitive Culture," and refers only to the fact

that among the Indian tribes "the skirt of the woman is longer than that of the men,"—a statement that evidently is intended to carry with it the impression that the Indians (including the Esquimaux) are a very modest people. Now the wearing of the long skirts is by no means an indication of modesty among women, and in some parts of the world has quite the opposite significance, and we are all well aware that many Esquimaux women are anything but either chaste or modest.

A curious instance of Sioux notions of modesty I met with in Washington, D. C., a number of years ago. Four or five big "bucks" had come to that city from their reservation to pay their respects to the President. One warm day during their visit they all took a trip down the Potomac on one of the regular steamboats that plied that stream. Gotten out in their full "togs," they attracted not a little attention, and among their admirers there were, as usual, not a few women. Several of these, apparently regardless of the fact that they were stirring up the passion in these untrained sons of the prairies, who had not been with their squaws for quite a while, vied with each other in their attempts to command their notice, or induce them to use the few words in English they knew. The party was grouped on the deck of the steamer, in full view of many other passengers, who were all standing about, like themselves. Owing to the warm sun, the light summer attire of the females facing them in such close proximity, and the effect of various odors that were in evidence, the Indians, as I say, were not long in being influenced by such a combination. One buck in particular, a superb specimen of barbaric physical development, seemed to gradually gain the idea that the pretty and very attractive young woman standing in front of him, was intentionally taking an undue advantage of his position,—indeed exciting him, where the feelings she engendered were not likely to lead to anything in the way of sexual gratification. He was losing his control; the emotions working within him were not difficult to be seen in the gleaming of his deep-brown





HOPI CHILDREN AT WALPI.

eyes, and in the soon ill-concealed, though slight, twitching movements he made. But no part of this seemed to dawn upon the unsuspecting women, whose presence alone was now all that was needed to excite this tawny-skinned warrior to that point where further restraint ceased to be a virtue. When he acted, it was with the suddenness of a lightning-flash, and the act was of the most extraordinary nature imaginable. Quicker than thought, and with a dexterity almost surpassing belief, he made a pass beneath her clothing with his hand, and with no gentle pull, secured rather more than a generous sample of the hair from her *mons veneris*. Never heeding the shriek that followed from the electrified and tortured victim of his audacity, or the excited commotion it caused among the other passengers—this stolid specimen of humanity simply grinned with pleasure at his success, divided the trophy among the other bucks who were with him, and then calmly viewed, with a far-off look in his eyes, the river scenery and the deep blue sky overhead.

On the 24th of December, 1906, my friend, George Wharton James, sent me from Pasadena, California, a very excellent photograph "of some Hopi youngsters" which is, by his permission here reproduced in Figure I.

In a later letter (Jan'y. 8, 1907,) he wrote me "The word Moki is the name we used to give the Hopi Indians before we understood that they themselves did not like it. The term has now dropped into disrepute, for the Bureau of Ethnology has decided, in the future, to call them Hopi. Hence, if you simply change the title to The Hopi Children at Walpi, it will be all right. . . . "I made (the photograph) myself at Walpi some years ago. The story connected with it, to me, is rather interesting. These children were very fond of me, and always used to come to my camp as soon as I reached the foot of the Mesa. On this particular morning, the thought suddenly occurred to me, 'Why not take a photograph of these youngsters?' The boys were in the condition shown in the photograph, but the little

girl had her short dress on, and they instinctively took the position which the photograph shows, and when my head was under the focusing cloth, the little girl evidently realized the nudity of her brothers, and without a word of suggestion from me, slipped her little dress off and stood nude with her brothers. As you are familiar, it is only very recently comparatively, that either boys or girls have worn clothes at all until the period of puberty."

The fact Mr. James mentions here was known to me many years ago, and I was visiting the Zuni Pueblo in the early 80's, when all the Indian children of that age never thought of wearing any clothing during the summer months, except on special occasions. It is quite otherwise now, I believe, and, since the advent of the whites, all that charming pristine innocence has come to be a thing of the past. From babyhood to old age, those people lived through their lives in the most natural way, nor knew they anything of all the pseudo-modesty that surrounds the rearing of children among our own people, nor the vice that follows in its wake in later years as an inevitable consequence.

Indeed, were our vice-suppressing societies enabled to succeed in carrying out all the putrid notions they entertain in regard to modesty and sexual matters in general, all morality would be at a discount; thousands of growing boys and girls would become perverted and ruined, and the entire atmosphere be rendered so rotten that no moral person could long exist in it. All those who understand such matters know full well that it is bad enough as it is. So far as pure mental and physical well-being are concerned, and leaving the questions of custom and opinion entirely out of the case, it would seem that the normal sexuality of the Indian made for a far better race, cleaner in mind and stronger in body, than our own, reared under the unnatural rulings of a distorted and entirely unnatural demand in such matters. As I knew the Sioux over thirty years ago, they openly fulfilled the requirements of the normal sexual impulse; while we, protected by brick walls and a hundred other kinds of places of absolute

seclusion, give way to no end of abnormal sexual practices, so foul in nature that more than half of them would cause a very Nero to blush with shame, not to mention the detrimental effect it is constantly exerting upon the mental and physical organization of the race as a whole.

In the days to which I refer, I have seen many a young Sioux buck and squaw do their courting standing up under a buffalo robe or blanket, in the midst of a big camp, with no one paying any special attention to the couple, who would quietly separate and walk away after they had communicated their sentiments in full to each other. Then, too, late at night I have taken a "smoker" with them in one of their big wigwams, with a few young married couples present, and six to eight old "bucks,"—the place being lit only by a very low fire in their midst. If any one of the couples were seized with the desire to copulate, the ever present buffalo robe or the trader's blanket was the only shield from observation they needed, and none of the company present paid them any regard during the operation. It shook up my preconceived views a little at first, for an experience or two; but after that it seemed not an unnatural thing to do—and they were very modest withal. They were truly modest, whereas all our modesty is modesty through fear. Such modesty is only too often at once converted into the rankest sexual license when the restraint is suddenly removed.

Precisely as the Indian has suffered by the introduction of syphilis, rum, and tobacco, through his contact with our race, so has his modesty and morals suffered through the same cause. Never shall I forget the scene I once witnessed, many years ago, out on the plains of Wyoming—a scene that could only have been enacted by the modern Indian, whose mind and morals had come under the influence of the Indo-European, with his false and prudish sexuality. It chanced that I had been overtaken by a storm some ten miles from the military post, where I was in charge of the medical department. A fine snow filled the air, and the thermometer registered

fifty-two degrees below zero, with a piercing wind blowing, emphasizing the meteorological conditions of that terrible night. My companion was a young contract surgeon, who, belated by the storm, was on his way of to join the station on temporary duty. At a distance of five miles from the post, we entered the ranch-house of a cattle-man, and here we found some dozen cow-boys and a black man-servant of mine, driven in by the severity of the weather. A big game of draw poker was on, barrels being used for tables, while the air of the place was simply 'fixed' with the fumes of foul tobacco and the rankest of whiskey. Hardly a word was being spoken, the men being as silent as their "guns" at that time were in their holsters. At the further end of the long single room, a dirty white sheet had been hung across, and beyond it a lit kerosene lamp had been placed on top of a barrel. This arrangement made, as it were, a small separate room, the only furnishings of which were a pile of buffalo robes thrown on the floor next to the sheet. Here sat two Sioux squaws—mother and grown daughter—whose forms, in whatever position they assumed, were thrown with telling accuracy upon the sheet as a moving silhouette. From time to time a man would drop out of the game and retire behind this flimsy curtain, for the purpose of having sexual intercourse with one or both of these women; and, although every detail of the performance was converted into a moving picture upon the screen, so engrossed was the audience with their winnings and losses, their drinks and their vile cigars, that no one paid any special attention to the depravity being enacted at the other end of the room. Such an episode would have been an unheard-of thing in the history of these Indians at any time prior, to the coming of the whites among them, and, to me, it was a sad commentary upon our boasted civilization and the Christianizing influences of our missionaries.

Modesty, of course, is a character that is very differently exemplified by different individuals of both sexes belonging to the same tribe of Indians, as well as

by an entire tribe of a distinct race of them. This I found to be the case in my studies of the Crows, the Navajoes, the Sioux, the Arapahoes, and the Zunians, as well as with other tribes. Climate does not appear to have any especial effect here, for some of the northern tribes, as the Crows, seem to possess strong sexual impulses, and with strong sexual impulses often is associated marked immodesty, while the reverse seems to obtain among some of the southern races.

One time, when post surgeon at Fort Wingate, New Mexico, and while engaged in making many photographs for the Government of a young "buck" Navajo Indian, employed in the various stages of the manufacture of a buckskin, I discovered, much to my surprise, that I could by no means induce him to allow me to photograph his naked feet—he protested against this with quite as much vigor as a Chinese woman would do; yet upon another occasion, while I was out hunting on foot on the prairie near the post, I came by chance, in the low scattered sage-brush, upon this same man, who at the time was having sexual intercourse with a squaw of his own tribe. My sudden appearance by no means interrupted him, for he simply looked up with a laugh, and informed me in broken and not altogether chaste English what he was up to, a fact that was sufficiently apparent to not require any particular explanation from him. She at the time was munching a mouthful of sugar from the trader's store, as the price of the privilege she had bartered. This incident is interesting from the fact that this Indian, so intensely modest with respect to his feet, experienced none of it when enjoying normal copulation in the presence of a third party, and that person not even a representative of his own race. It is as well to remark in this connection that both of these Indians were clothed from head to foot, and only such parts had been opened as were necessary to admit of coitus. This was also the case with the Sioux described by me on a former page.

I have referred above to the matter of modesty among the Crows, and, in closing this question for the present, I desire here to quote the following truths from Ellis's chapter on "The Evolution of Modesty" in his "Studies of the Psychology of Sex." What he states is taken from Doctor A. B. Holder's article in the "American Journal of Obstetrics" (Vol. XXV, No. 6, 1892), who says: "A sense of modesty forbids the attendance upon the female in labor of any male, white man or Indian, physician or layman. This antipathy to receiving assistance at the hands of a physician is overcome as the tribes progress toward civilization, and it is especially noticeable that half-breeds almost constantly seek the physician's aid." Dr. Holder mentions the case of a young woman who, although brought near the verge of death in a very difficult first confinement, repeatedly refused to allow him to examine her. At last she consented. "Her modest preparation was to take bits of quilt and cover thighs and lips of vulva, leaving only the aperture exposed. . . . Their modesty would not be so striking were it not that, almost to a woman, the females of this tribe are prostitutes, and for a consideration will admit the connection of any man." This tallies with my own observations upon this tribe, made in the latter part of the 70's, at Fort Custer, Montana. I also know of a similar instance among the Sioux, and one that had a fatal termination, as the woman declined utterly to allow the military surgeon of the post to interfere in the case. She, too, was a *primipara* struggling with a transverse presentation, that their own attendant (squaws) failed to correct. Most Sioux women, however, are entirely virtuous, though there are exceptions to the rule among them.

HAS THERE BEEN AN INCREASE OF SUICIDE
AMONG THE OPIUM ADDICTS SINCE
THE PASSAGE OF THE HARRISON ACT,
AND IF SO WHY?

By C. B. PEARSON, M. D.

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SO far as absolute knowledge goes as to whether the victims of the various forms of the opium habit have been committing suicide in greater numbers since March 1st last, I must admit that I do not know. So far as newspaper reports go, it would appear that suicides among this class have been very much more frequent. There are good reasons why this should be so. It is the purpose of this article to show what these reasons are. A study of the peculiarities of the opium psychosis will reveal these reasons.

I use the word opium, because that covers morphine, heroin, laudanum, opium smoking, and other varieties of the habit. By the opium psychosis I mean the ordinary mental and moral symptoms induced by opium. I do not mean the insanity or mental breakdown that very rarely follows straight opiumism but frequently follows opiumism complicated by alcoholism, cocainism, chloral hydrate and other addictions. The most common addictions among our people are the tobacco, alcohol, opium and cocain addictions in the order named.

Before going into a consideration of the opium psychosis, a consideration of the motive that calls for a continued use of these agents, will I believe, prove profitable.

A cozy fireside, an easy chair, a paper or magazine, and a pipe or cigar spell forth comfort of a winter's evening. Sensible wives are aware of the fact and make

but little objection to use of tobacco by their husbands. The prime motive for the continued use of tobacco is its real or supposed increase of one's comfort. Alcohol is associated with hilarious good fellowship, later on it is apt to develop very insistent demands of its own. The prime motive, however, is a desire to escape through its use from the cares and worries of life for a time. Cocaine produces a peculiarly fascinating form of inebriety and it is the desire to again experience these sensations that is responsible for the continued use of the drug. As soon as one discovers that he has become an opium addict, the motive for its continued use is not comfort as is the case with tobacco, not a desire to forget for a time the cares and worries of life as is the case of alcohol, nor yet a desire to again experience the seductive sensations of inebriety as is the case with cocaine. The drug is continued in order to escape from the terrible mental and nervous depression and the physical suffering that invariably follow in a few hours after its discontinuance. So the opium addict is in much the same predicament as the man who had the tiger by the tail. The opium addict finds it irksome indeed to continue his addiction and he is too much afraid of the consequences to let go of the drug. Alcohol makes a person self assertive, careless of other people's opinion and increases one's self importance, etc. Opium on the contrary causes self-depreciation. The addict feels ashamed and mortified to think that he is in bonds. Out of this self-depreciation arises the secretiveness, the tendency to prevarication and to seclusion that are nearly always prominent symptoms. It may not at first appear that the fear, timidity and cowardness that accompanies every case of opium addiction to a greater or less degree also follow from self-depreciation. A little reflection will show us that this is the case however. Self confidence is the foundation upon which all courage rests. An incident that occurred in Paris just after the Napoleonic wars illustrates this point very well. A French officer, reputed to be the best

swordsman in Europe, was in the habit of publicly insulting one officer after another of the allied armies then stationed about Paris. The code of those days demanded that a public insult given by one entitled to call himself a gentleman, should be answered by an immediate challenge to a duel. In this case, the choice of weapons rested with the Frenchman. His skill with the sword was so great and his confidence in his skill was so unbounded that the killing of one officer after another was nothing more than an agreeable pastime. An English officer took it upon himself to stop all this. He walked into a cafe where the Frenchman was sitting at a table, stepped up to him and gave him a hearty cuff on the side of the head and spat in his face. No challenge followed. The Frenchman had no confidence in his skill with the pistol and did not have the courage to offer himself as a target for the Englishman's weapon. He resigned his commission in the army and retired from public view, a hero no longer. So we can readily see how a lack of self confidence tends to undermine and finally destroy the addict's courage. This lack of courage is essentially pathological. In many cases, however, it becomes very much intensified through rational causes. Many an addict has destroyed syringe after syringe in vain attempts to free himself from the drug. There can be no doubt but that these repeated failures intensify to no small degree the addict's cowardice. As the years go on the dread of being separated from his drug supply, through lack of funds, through accident, through impaired earning capacity, etc., hangs over the addict like a perpetual nightmare. The newspaper writers who have lightly referred to morphine as "happy dust" have but a faint perception of the real truth of the matter. I know of nothing that can so completely rob one of all enjoyment as opium. The opium addict passes through life in fear and trembling at the best. And now that the Harrison Act is in force naturally his fears have become greatly intensified. That he should think of suicide is not to be marveled at. And that he actually takes the

fatal step need not cause surprise to one who knows the peculiar workings of his mind. But, says the reader, with sanitariums all over the country, hospitals and insane asylums standing ready to receive and care for the addict it is silly for the addict to even think of suicide. His outlook upon life and its problems is that of the opium addict. His mental operations are in harmony with those of other opium addicts and not in harmony with your mental operations. If it were possible for the normal individual to experience in his own person the mental, nervous and physical suffering of opium withdrawal, he would not wonder at the addict's dread of this ordeal.

This matter of opium induced cowardice is one of degree. Very many addicts retain a creditable amount of fortitude and we need not look for suicide among this class. On the other hand I do not believe that anyone can use opium to excess for ten or more years without considerable impairment of their courage. And some addicts are truly abject cowards. To make the addict's view-point clear to the reader, let us suppose a normal person to be in mid ocean in an open boat without food or fresh water. Will the person endure to the end and die in the boat? Or will he become delirious and jump into the sea? Or will he be overcome by the actual suffering and deliberately jump in the sea? Or will the intensity of his fright caused by the harrowing nature of his predicament drive the man insane and cause him to jump into the sea? The obviously correct thing for a man to do under these circumstances is to endure till the end, because many ships are coming and going over the waters of the ocean and help may come before it is too late. But need we upon this account be surprised, because the man fails to do the obviously correct thing? But, says the reader, the comparison is unjust! The comparison is just except that the man in the boat is in a more favorable situation so far as the chances of manifesting fortitude are concerned. The man in the boat is a normal man with a normal man's courage to begin with. The addict is not a normal man and his

courage has been undermined by many years of abuse of opium. The suffering that the man in the boat is about to endure is not as great as that which the addict faces when his present drug supply becomes exhausted. Furthermore, death will come as a relief very soon to the man in the boat in case no help arrives. Death may or may not come to the addict, it is a matter of uncertainty. Again if help does come to the man in the boat in a few days he will become a normal man again. In the case of the addict even if help of the right sort does come to him, it will be weeks and months before the addict is really and truly a normal man again. This does not mean that the addict need suffer very much in getting rid of his trouble; if he falls into really skillful hands he certainly will suffer but little. However, as this fact is utterly unknown to those addicts who would be at all likely to commit suicide, it is of no avail as a preventative. But, says the reader, there is at least one feature of the man's situation in the boat where the comparison is unjust. The man in the boat adrift upon the vast waste of the waters of the ocean is utterly alone, while the addict touches elbows with his fellow man upon every hand and is within reach of sanatoria that are not only ready but eager to assist him. Let us examine this feature of the matter a little. I have known addicts who have used some form of opium over ten years without mentioning the fact to a single soul. How can anyone under any circumstances be any more alone than such an addict? But, says the reader, if the opium addict is alone in his trouble he is voluntarily so. I say that he is not voluntarily so. This may seem like an absurd statement. I will endeavor to show that the statement is founded upon demonstrable facts.

We have seen that opium can and often does make a despicable coward of a person. Opium generally causes a most intense and peculiar form of secretiveness. The opium addict is not secretive because he chooses to be so but because the opium compels him to be thus and not otherwise. So when I say that the opium addict

is not voluntarily alone in his trouble, I mean just what I say. The addict bears his troubles alone because it is one of the peculiar features of his disease that causes him to do so. The symptoms of cancer are physical and tangible. The psychological changes induced by long years of indulgence in the use of opium are every whit as constant as are the physical changes induced in the body by cancer. Some secretive addict may go to his family physician and say "Doctor, I have a friend who has been taking morphine for ten years and is now taking 30 grs. daily, is there any help for him?" The doctor says no, he may go to some sanitarium, but even if he gets cured he will go right back to it. After a long time he again musters up enough courage to approach another doctor and gets the cheerful advice to tell his friend to cut the thing out at once. As the addict has already tried this many times, such advice does not tend to dispel his gloom to any great extent. There has been so much written recently upon the subject of opiumism that it does not seem that any doctors could be found today who would give expression to such deplorable ignorance. I wish all doctors had the manliness and common sense to say that they don't know when they don't. Such medical counsel as the above may have been largely responsible for more than one suicide. Some friend may approach the addict and say to him: "I know of a sanitarium where they are curing morphinism, why don't you go?" To some addicts who have not lost all of their courage an appeal of this sort may be pleasing, but to others the word "Sanitarium" brings to them no more cheerful thoughts than padded cells, restraining sheets, straight jackets, locks and bars, constant surveillance and misery and horror upon a most extensive scale. Other addicts have already been to some "fake" institution and received no more cheering experience than punishment of the most horrible description and a depleted purse. Others have put themselves in the hands of some doctor who meant well but whose method of treatment is more vigorous than wise and have since

relapsed. One cannot very well blame these addicts for being a little skeptical, and especially one cannot blame them for being skeptical about being cured without undergoing intense suffering. One recent writer in describing his method says the patient will suffer merry well and so he should. I fail to see the philosophy of this view of the matter. Suffering is no preventative of relapse. And I have very good reasons for believing that it contributes in a marked degree to relapse. A study of these reasons belongs to a discussion of the treatment of the disease. Some of the doctor's former patients may have since relapsed and have since committed suicide on account of that very suffering that he seems to consider to be so salutary. Harsh methods of treatment only serve to frighten these people and tend to cause them to put off trying to get well on account of the harrowing tales that they have heard from others. They really can be kept comfortable during the greater part of the treatment, and I believe there are good sound therapeutic reasons for doing so. But let us return to the consideration of suicide among these people.

I can readily see how the fear of being separated in the near future from their drug supply may drive some of these addicts temporarily insane and then to suicide. In other cases the self depreciation and shame and the resulting secretiveness may have become so great that they elect suicide rather than face the publicity of their misfortune, that they think will inevitably follow separation from their drug supply. Some of the laity, especially, come to look upon opium as their only support and cannot conceive of life without it, as being otherwise than unendurable. I think that we need not look for suicide except among those addicts, where the psychological changes are extreme, or among the mixed drug takers where general mental breakdown has already taken place. The recent addict is not in much danger. The wealthy addict can assure himself of a continued supply, if need be by residing in some country where the laws are less severe. Those who are not so secretive but that they have in-

formed themselves of sanitarium that they can resort to in case of need are not in much danger of suicide. In the underworld opiumism is more or less a social vice. These addicts assist one another, keep one another informed of sources of supply, and of places where they can secure humane treatment. Now that the shock of the Harrison Act has spent itself, I think there will be very few more suicides, there ought to have been none. A time limit in all laws of this character would have avoided whatever loss of life there may have been. The Harrison Act of itself did not cause so much alarm except in those states where there was already a severe state law. A time limit I believe would render all laws of this character more effective rather than less so. Because we could all of us obey the law then out of respect and approval of the law and in the confidence that we could do so without doing harm or endangering the lives of the unfortunate opium addicts among us. At present there is the fear of the law on the one hand and the fear of working harm to an unfortunate addict on the other. That is, this must be the dilemma that all physicians find themselves in except those who are innocent of all knowledge of opiumism. A time limit would have saved much embarrassment. In such a case every addict could have been informed by his physicians that all prescriptions calling for opium after such a date were to stop and the matter of a suitable sanitarium or plan of treatment could have been talked over at leisure. Opiumism is a curable disease. Whether it be large or small, the loss of life from suicide on account of opiumism could have been prevented.

THE PREVENTION OF MENTAL DEFECT THE DUTY OF THE HOUR.

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THAT the prevention of the transmission of mental defect is the paramount duty of the hour, is a truism not to be questioned; and to this end, honest, rational eugenics is an absolute necessity to stem the tide of degeneracy, now steadily on the increase.

Life stands not as the product of the Demogorgons, but as a gift of the great King Himself; and is revealed in many forms; no one form left to chance, but made according to law from a pattern for which the forebears are responsible. This may be hidden, like the ocean drift-wood, but at last, it is cast up.

Heredity, the law of life for human, as truly as for beast or plant life, is clearly proven. To be born aright, one must be born again; but the inception must be with the forefathers. Degeneracy once permitted to invade a lineage can never be wholly eradicated; lessened materially and even reduced to a minimum it may be, but sooner or later, in one generation or another, a defective is bound to appear.

The carelessness or ignorance of an apparently normal mother during parturition; or that of a physician at the birth; the neglect of a nurse—all may become tributary to defect; and the concentration of neuroses in a child, frequently unsuspected, may date back a century before a physiological house-cleaning takes place.

The Registrar General's last statistics in Great Britain show that in England and Wales, with a population of 36,070,492—161,963 were returned as suffering

from mental infirmity—106,660 being insane and 55,303 mentally defective; and since 1901 shows an increase of insanity 27.3 per cent, and of mental defect 13.2 per cent.

In the United States there are over 350,000 avowed cases of mental defect, showing one to every 200 or a little less than $\frac{1}{2}$ of 1 per cent of the entire population.

Some 21,000 of the feeble-minded and epileptic are provided for by 27 States in 37 institutions; in addition, about 1,000 are cared for in private schools. Therefore, there are at least 328,000 mental and moral defectives at large, perpetrating, unrestrained, the defilement of the race.

Throughout the entire United States no less than \$94,000,000 is annually spent in the care of the insane, and \$90,000,000 for the feeble-minded; making a total of \$184,000,000 expended yearly upon our helpless population.

The percentage of mental defect among the foreign element in the city of New York, where our immigrants are mainly admitted, is 2.48 times greater than that of the native-born. A study made there in 1912, of the alien insane and feeble-minded cared for in the State hospitals, shows no less than 13,163 foreign-born patients.

For these, at a cost of \$262 per capita, the annual expenditure amounted to \$3,448,706, and as the average hospital age is eleven years, the sum of \$37,935,766 will have been paid by the State at the end of that period for the care of mentally defective and diseased aliens.

Herein is clearly shown that the physiologic, psychologic and sociologic researches of the 18th and 19th centuries have, within the 60 years portrayed, certainly produced practical results in providing protection for the defective. But it also shows that the greater aim of protection for the race has not been attained.

A glance at the exposition which science has given in relation to cause and effect, may make clear the means by which the ultimate suppression of so great an ill may best be attained.

That heredity is naturally a dominating factor in all life is clearly proven in the researches of Mendel, which exhibit unerringly how definite characters are formed in the individual, and how directly they are transmitted, so that decendants to at least the fifth generation may develop the characteristics of their forebears in greater or less degree. Not that the child will necessarily exhibit actually the same defects, or qualities of the parent, but it does inherit a strain, be it good or bad, which will be stimulated or kept in abeyance according to the prepotency of connection.

Science, following up this principle, has shown furthermore that by a careful study of family history, recognizing peculiarities, or traits lacking, it may be possible to suppress, but not to eliminate this strain. The Mendelian law clearly affirms that the germ plasma of normal male and female contains a "determiner element," for every tissue of the body; and when these "determiner elements" are of equal potency, and blend perfectly, the decendants will possess characteristics of both parents. Whenever there is a defect in the germ plasma in one parent, the analogous "determiner" of the other will assert itself, and the child inherits the stronger characteristic, be it good or evil. Thus it is not infrequently observed that apparently normal persons produce feeble-minded children; or there are families where some members are bright, and one or two, for no apparent reason, feeble-minded; while on the other hand is seen a normal child, the offspring of parents—one normal and the other abnormal. Such are clear examples of the prepotency of the infusion of pure blood; the taint is there all the same, in abeyance, ready to respond to the first call of inheritance or accident.

This is especially to be noted of mental defect; imbecility will brede imbecility, and where there is a trace of feeble-mindedness in a family it is sure, sooner or later, to reappear, the defective "germ plasma" producing an abnormal.

Insanity and defect—mental, moral and physical—inevitably find a corollary in the after family history.

Recently my attention was called to a family where both parents being feeble-minded, there were 22 imbecile children; in yet another were 18 idiot children—also of defective parents—the community in which these latter lived, taking pride in exhibiting them as curiosities. One family shows in four generations, 34 imbeciles; and two other families, each with an idiot mother, show in the one 7, in the other 9 illegitimate children.

Surely some one should have suggested that these cases required surgical aid; yet no steps had been taken to such end.

Venereal diseases cause much idiocy and imbecility, and both directly and indirectly are potent factors; nullifying the wage-earning capacity of the father and reducing the poor, innocent mother to a state of hopeless invalidism. In thus destroying domestic happiness they lower the whole *morale* of family life, and finally are visited on the unborn child who enters life the diseased, starved victim of an unhealthy heredity and environment.

Syphilis is fitly named the "King of Abortionists" and "Gonorrhoea the Queen of Sterility."

In a study of harlots numbering 424—80 per cent plus were found to be distinctly imbecile, their mental age never exceeding twelve years. The 20 per cent adjudged normal were found to be unable to carry on a consecutive conversation; and, never reading papers or books, were absolutely ignorant of the ordinary topics of the day. A large majority of the whole had contracted venereal diseases, and were pronounced alcoholics and drug addicts.

Of some studies made in the Juvenile Courts, numbering 1487—61 per cent were found imbecile beyond a peradventure, their mental age averaging from $7\frac{1}{2}$ to 11. Of these, over 50 per cent were victims of venereal diseases.

Unfortunate results may be traced to the abuse of drugs and to alcoholism, which latter, with its deleterious

effect on cell and germ-life may, even in moderation, according to Darwin, Gladstone, Cobden and Comte, accomplish more harm than a combination of famine, pestilence and war.

From this brief scanning of statistics, one cannot fail to recognize the necessity for the enforcement of measures which experience has demonstrated as absolutely needful steps toward prevention, viz: the Separation, Sequestration and Asexualization of degenerates; and further revision of Marriage Laws forbidding increase.

Such separation protects society from contamination and the defective from a world where, brought into competition with normal people, he is forever misunderstood and driven backward—be it in the home, the school or in business circles.

Separation, first, of normal from backward children in the schools; second, the massing in classes those of similar mental capacity, that they may be trained in occupations proven possible for them—industrial, manual or intellectual—such as farm and house work, shoe-making, carpentry, dress-making, painting or printing; in these aiding also in living expenses.

In order to effectually accomplish these aims, there must be permanent Sequestration, otherwise the trained imbecile is a greater menace to society than is the untrained, in that with latent powers and talents developed to the point of concealing defect, he is no longer recognized, and has opened to him a larger field for the indulgence of emotional or criminal instincts.

Training schools for defectives, without the protection of permanent sequestration, find themselves often twice defeated in the aim of preventing increase and lessening crime; and by the loss of their trained laborers aiding in self-support and in the care of the helpless. For this evil, legislation offers no remedy, no state in the union providing for indeterminate sequestration.

Why may not the Government rather set aside a reservation for such? Surely they are as deserving as are the Indian or the Negro, and such protection

more reasonable and cheaper than penitentiaries for which there would soon be no need.

Asexualization has at last won its way to legal recognition as the only assured means of dealing with present numbers, not only preventing increase but lessening the exaggerated sexual impulses and contributing to the happiness of the individual, thus insuring a certain amount of freedom in home or community life.

In this matter the past decade seems to present a new trend of thought, in that what was formerly termed brutality, is beginning to be viewed as simply the safeguarding of the innocent, and the preservation of nations from racial degeneracy. Some 12 States have concurred in affirming the necessity for sterilization; Indiana leading the way in finally gaining the endorsement of legislative action.

The application of the principle in these states cannot fail to correct prejudice and misunderstanding in the mind of the general public, making clear the nature and simplicity of an operation involving no danger and almost no discomfort to the subject, and insuring benefit to all.

The removal of the organs is not always essential, but is to be preferred as giving absolute security, and when performed upon youth, desire almost entirely ceases, or at least is held in reasonable abeyance.

There is no reason why the operation should not be so safe-guarded as to prevent license. It should be permissible only after study of and testing by accredited alienists and surgeons, and this is best attained in the grouping of numbers by separation and segregation.

In the reconsideration of Marriage Laws, progress is also shown in that a large majority of states—some 38—make proven defect in either or both parties, a nullification of marriage; but none as yet require for obtaining a marriage license a certificate exhibiting a clean bill of health for two generations back; notwithstanding the large number of cases recorded showing the reappearance of unsuspected defect, usually intensified, in the third or fourth generation.

It has been urged that stringency of marriage laws would encourage vice; but why not make illicit cohabitation with a defective a penal offense, as does the "Mental Deficiency Act" recently brought into operation in England?

It is to be hoped that the day is not far distant that shall bring a consensus throughout the union, regarding the prevention of procreation by the unfit, as absolutely necessary to stem the tide that is polluting the race.

The separation, segregation and asexualization of the unfit in one generation, must in the nature of things bring a two-fold blessing, not only reducing numbers in one, but raising and accentuating the standards of successive generations.

With such division of classes presenting a permanent object-lesson, of fit and unfit, the question with each individual being simply "to which shall *my* descendants belong?", eugenic marriage will, as the outgrowth of such civilization, become a natural custom with all, as it is now with a few, needing no law to enforce it.

The experience of the ages shows that the progress of a nation is coequal with its maintenance of race-ideals, and that the survival of the fittest can never be attained if no restriction is placed upon the propagation of the unfit.

In this study of imbecility the vital importance of its early recognition is a point arrived at by science in many lines—physiologic, psychologic and pedagogic—a dictum which workers in social welfare also endorse, as being clearly proven in their varied experiences.

That the general public—the entire lay world—be brought to regard every imbecile as a social menace, and the segregation and asexualization of such imperative, has long since been affirmed by leaders in charge of them; and was clearly acknowledged by the women of our land when the subject being broached before a conference of mothers, I was urged by them not only to preach this

doctrine, but to preach it in terms that he who runs might read.

With public thought so crystalized, the demand for increased facilities for the care of irresponsibles must meet with better success than in the past, being accepted by legislation not as contributions to charities, but a protection to the safety of the general public—an ounce of prevention being recognized as truly worth a pound of cure.

The effect of such conditions and environment upon a rising generation would tend to create a far higher education than the much-vaunted teaching of sexology in schools. Under present conditions a subject forbidden general discussion is often greedily swallowed as forbidden food by semi-defectives, to the detriment of themselves and others. Whereas the evils of heredity, guarded by legislation, and as openly discussed as are the evils of war upon a nation, will bring to our youth a normal consciousness that the right of marriage is not a mere legalizing of the cohabitation of the sexes—the sentiment of too many of the present day—but is a sacred entrance to the vocation of parenthood to which all are not called; a vocation for which the fitting of ones self by the cultivation of the being—mental, moral and physical—toward the gaining of a noble self-hood is the truest religion as well as following the dictates of the highest patriotism. Such preservation of things sacred would lead, surely, to a day of chivalry greater than that of past ages.

When the world shall be brought to recognize that the production of maimed life is a greater crime than it at present regards its destruction; when the arm of law shall be extended to control sexualism as it now does brutalism; then growing generations, viewing in family and community life the result of true self-control in the noble self-hood attained by their elders, will press onward, inspired by high race-ideals, in this work of race preservation.

NOTES ON THE HISTORY OF PSYCHIATRY. X.

(Cont. from May, 1911.)

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IT is nearly two years now since the last contribution which I published in the *Alienist and Neurologist* on the History of Psychiatry. In the August number, 1913, I finished a translation of Falk's celebrated study on the Psychiatry of the Ancients, promising to return to the classical work of Friedreich, the chapters from which I have had in preparation for some time, chiefly through the courtesy of Dr. C. Bruder while interne in the Government Hospital for the Insane in Washington.

Work on the two large volumes of Modern Treatment of Nervous and Mental Diseases, with Dr. W. A. White of Washington, published by Lea & Febiger in 1913, on the Translation of Dejerine's Psychoneuroses, published by Lippincotts in the same year and a second edition in 1914, on the Diseases of the Nervous System, a Text-book of Neurology and Psychiatry, by Dr. White and myself. The translation and publishing in the Nervous and Mental Monograph Series of Rank's Study on the Myth of the Birth of the Hero, and in the Journal of Nervous and Mental Disease of Eppinger & Hess' Study on Vagotonia with Dr. W. M. Kraus of this city, these with a steadily increasing and arduous practice have interrupted me in the fulfilling of my promise to continue this series of Notes on the History of Psychiatry.

I have indulged in this personal reference largely because Dr. C. H. Hughes has encouraged me to continue these notes, advising me that some of his readers have found them of interest, and furthermore, because the original sources are mostly inaccessible to students of psychiatry.

In 1906 when I began the translation of Friedreich's History, there were only four copies known to me in the libraries of this country. In the same year I found a copy of it in Berlin and was about to "get away with it" when to my interest I found it had been obtained for Dr. Adolf Meyer for the Phipp's Institute. Shortly thereafter I secured a copy for my own library.

In February, 1910, February, 1911, and in May, 1911, in the *Alienist and Neurologist* the work of Friedreich on the Ancient Period was begun. I purport going on here from where we left off in May, 1911, and took up the work of Friedreich.

XVI.

CELIUS AURELIANUS

Celius Aurelianus in ¹the writings² of Grainger³ is placed before Galen and Aretaus with respect to his writings on mental disturbances. His discussion⁴ of mania and melancholia and especially of mania is a very detailed dissertation.

I. The chapter on Mania begins with the exact etymology of the word, which follows: "Plato in the Phaedrus mentions two kinds of madness; one a mental strain, caused by the body, the other divine or instilled and that Apollo is the inspirer of it and it is called divination, by the Ancients, however, called madness."

"The very ancient Greeks used to call by the name mania what is now called mantike (prophecy.)"

"Likewise another, he says, comes from Father Bacchus, another from love and he calls it erotikon. Another from the muses, which he calls protreptikon, (stimulating) which appears to inspire song. The Stoics said madness was twofold, one a kind of folly, which they thought made every fool insane, another from the alienation of the mind and sympathetic (affection) of the body. The followers of Empedocles say one is caused by the purging of the soul, another by the alienation of the mind, caused by unevenness (lack of balance) of the body, about which we are about to write which the Greeks, if anyone has a great uneasiness, call mania or what un-

duly relaxes the soul or the mind; for they call it *manon* (loose), abandoned or soft; or truly what pollutes invalids, for the Greeks call *lumainein* to pollute; or truly what makes the patient desire wildernesses or solitudes, for the Greeks call being left alone and seeking the wilderness *monosthai* (=to be solitary); or what holds the body too tenaciously and is driven off with difficulty; on account of that the Greeks spoke of it as *mania* or surely what makes the invalids hard and enduring, which the Greeks call *hypomonetikous* (patient.)"

Mania is a chronic ailment without fever, this differentiates it from phrenitis. It occurs in youth and manhood, is more common in males than females, and more common in youth than in old age. Sometimes its causes are obscure, at other times they are known and again largely so it may arise because of psychic disturbances. If the disturbance does not appear suddenly it is preceded by symptoms similar to those that precede epilepsy and apoplexy. Following⁶ this, Aurelianus gives a detailed description of the disease as given by earlier writers. It appears from the following:

"So then one mad man thinks himself a sparrow, another a cock, another a God, another an orator."⁷

That he mixes illusion (*Fixenwahn*) with delirium (*Wuth*). It is strange to note that he maintains⁸ that mania is not a disease of the mind;⁹ first because the philosophers had written nothing of its treatment, and secondly because bodily ailments preceded the condition.

The treatment, he says, is the same as for epileptics. He especially points out the need for complete rest, and the keeping away of disturbing influences as light and contact with strange persons, etc. It is noteworthy that he gives especial instructions to the attendants, and that he gave thought to psychic treatment. He is the first one to recommend the use of the leech in the corporal treatment of the insane.¹¹ The balance of his treatment is quite similar to that of his predecessors. He is very insistent on sleep for the patient. For the convalescent he gives various psychic directions, such as

reading and conversational practice, and the seeing of plays. Each should be amused according to his education. For the uneducated, shows only are suitable. In addition bodily activity, baths and friction rubs should be provided. In closing, Aurelianus censures some of the methods of treatment used by other physicians.¹² It is in this criticism that we learn the methods of Asclepiades in which he makes use of singing, music, the lash, binding, compulsion through hunger and thirst, wine, and kindness. It is these that Aurelianus censures.

Caelius Aurelianus discusses melancholia with a few words.¹³ He gives depression as its chief characteristic and seeks for its cause in the disturbance of the digestive system, and as a psychic cause he gives fear and sorrow. It is more common in the middle aged and men, than in women and other periods of life. His description of the disease is quite similar to that of Aretaeus. He discards blood letting and hellebore and his entire treatment centers around astringents and cathartics.

Outside of this his therapy here is the same as that given for mania. He recommends a mixture of aloe and absinth as a potion.

XVII

GALEN

Claudius Galen, born in Pergamos, in Asia Minor in the year 131, supplies less on the pathology and therapy of diseases of the mind in his numerous writings than one would expect, although Daniel Halback writes a whole book about him in reference to this subject.

Both of Galen's discussinos on the diagnosis and treatment of the errors of every soul (On the diagnosis and treatment of the diseases peculiar to every soul) are not pertinent here. Their contents are ethical and censure the customs of his time. What material would be of use here is scattered in single passages.¹⁴ and there is nothing in them that has not been given in the previous chapters. Therefore, I will consider his works briefly.

In melancholia he makes a marked difference as to whether it is the entire mass of blood that is affected

or only that of the brain; he says this makes an essential difference in treatment, for in the first instance where the entire body contains melancholic blood, it is essentially necessary to let the blood, while in the second instance, it is unnecessary, unless there are other indications for doing so.

Galen sets forth at length and in detail, what kinds of meats and nourishment are the cause of melancholic blood. As other writers of his time he mixes melancholia with a fixed delusion (*Fixenwahn*). All melancholics are similar in that they suffer from fear, sorrow, and misanthropy, and are tired of life, however, all do not wish to end their life. Some even fear death. Just as the external darkness instills fear in persons who are not stout hearted, black bile produces fear in melancholia by darkening the spirits of life in the patient. The physician and philosophers are agreed that the humors of the body had a distinct influence on the function of the spirit. Therefore, those physicians who do not write of this influence of the humors (for example Erasistratus) did not trust to write on melancholia.

In a similar manner as told of by Erasistratus, Chap. XI, Galen disclosed the secret love of a woman for the dancer Pylades, through feeling her pulse¹⁶:

Cl. Galeni, de dignotione atque medela errorum in cujusque animo; Graece ed Joh. Casel, Helmst. 1592, Graece et lat Rudolst 1715.

Cl. Galenus, de dignoscendis curandisque animi morbis. Basel 1587.

Dan Halbach von der Porten. De Cognoscendis et curandis animi morbis ex Galeni sententia Regiomont. (Konigsberg). 1515.

XVIII

MARCELLUS

About Galen's time there lived in Rome, Marcellus, born in Sidas in Pamphilian (therefore he bore the surname Sides.) He wrote¹⁷ forty-two books on medicine in hexameter, in which appears a description of lycanthropy, which I mentioned in Chap. IV.¹⁸ These patients howl like wolves, and wander about at night in graveyards and other out-of-the-way places. The disease appeared to grow worse in the spring of the year.

Oribasius¹⁹ and Aetius²⁰ have saved fragments of the writings of Marcellus.²¹ They will be quoted when discussing Aetius.

XIX

ORIBASIOS

Oribasius,²² a friend and contemporary of Emperor Julian,²³ as is well known, made extracts from the published medical works of his time and systematically arranged them into seventy books.²⁴ From these books he drew the most important matter and gave the work the title of *Synopsis*.

Oribasius therefore ranks only as a compiler;²⁵ and it will not be necessary to dwell on him long since most of what he has to say has been given in extracts from the authors previously quoted.

Of his essay on melancholia we only have a fragment, for he begins with a third type of melancholia.²⁶ According to his description it is hypochondriasis. Fear and depression are the chief symptoms given. Treatment consists of proper diet, baths, and in the deep rooted sickness aloe, absinth, colocynth, and black hellebore should be given. He differentiates melancholia from insanity, and designates the latter as the ripened fruit of the black biled ills. The article is titled "*ex Philumeno*." The treatment of insanity is the same as that of melancholia.

The tenth chapter²⁷ deals with lycanthropy taken from Marcellus.

With regard to psychic dietetics, Oribasius teaches that the bodily development of a child should be looked after before trying to cultivate the mind. A good education consists in allowing the mind to rest until the seventh year, and not till then should a child be given literature. Grammar and geography should not be attempted until the fourteenth year.

1. From Sicca in Numidia. The dates of his life are not accurate. It appears that he quotes Galen and Galen quotes him, therefore, it is taken that they lived about the same time. (J. G. Voss, *de natur. artium*, Lib. V. Cap. 12.) It is taken according to barbarian Latin that he lived about the 5th century (Reines var. lect. Lib. III., Cap. 17.) In other general respects we can take him as a contemporary of Trajan and Hadrian.

2. De morbis acutis et chronicis, Libri. VIII. (Amstel 1755.)
3. De febre anomala batava, Altenb. 1770, p. 87.
4. Morbor. chron. Lib. I., Cap. V, VI. (P. 325-341.)
5. The word "furor" was generally used by the ancients in a protracted sense; so that it can be taken to signify an unruly display of pleasure, as for example in Horace Carm. Lib. II. Carm. VII, Vers. 27, 28. "... recepto. Dulce mihi furere est amico." "It's sweet to me to be mad (with joy) over a friend regained."
6. Page 326, etc.
7. Page 328.
8. Page 329.
9. The statement that the presence of psychic disease is not to be sought in the mind, but in the body. I tried to prove in my sketch on the general diagnosis of psychic diseases. Wurzburg, 1829. Sec. 6.
10. Page 329-339.
11. And if the countenance or face is much affected, the whole body will have to be relieved by bloodsuckers, which we call leeches.
12. Page 335-339.
13. Page 339-341.
14. In the books: de symptomat caus., de symptom different and de loc. affect.
- Lib. III, Cap. 6, 7, 10 (Vol. VII) Edition of Charter, Paris: 1679 fol.
15. De loc. affect. Lib. III. Cap. 10.
16. De praeognitione, Cap. VI (Zacutus Lusitanus (de medical princip. Hist.
- Lib. I, Histor. 40) comments on this story of Galen.
17. Sprengle, Hist. of Medicine, II B. S. 172.
18. Eudocia, apud Villosion, anecd. graec. I. 299.
19. Synops. Lib. VIII. Cap. 10.
20. Tetr. II., Serm. II. Cap. II.
21. Fabricii Bibl. graec. ed. Harles T. I. p. 15.
22. Born in Pergamus according to Eunapius (vit. sophist. p. 181) and according to Philostorg (hist. ecclesiast. Lib. VII. Cap. 15, p. 520) in Sardis. He lived up to the middle of the 5th century.
23. Oribasius accompanied Emperor Julian on his last campaign, who appointed him questor at Constantinople, and he was sent on several important missions, for example to the Oracle at Delphi. (Cedren, chronic. Paris, 1647. ed. Fabroti, p. 250.) The followers of Julian, Valens and Valentinian, banished and took from him his title, but later seeing their injustice, recalled him and made public restitution. (Eunsp. a. a. O. p. 182.)
24. Only 17 of these books remain to us.
25. Heinroth, a. a. O. S., 89.
26. Synops. Lib. VIII., Cap. 7.
27. Synops. Lib. VIII., Cap. 10.
28. Aetius gives the same fragment from Marcellus. I will quote it under Aetius.
29. Synops. Lib. V., Cap. 14.

(TO BE CONTINUED.)

THE CIGARETTE FROM A MEDICAL STANDPOINT*

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ALTHOUGH a great deal has been written upon the subject of the effects of cigarette smoking upon the human body, much of it is without either scientific or practical value, as it is based upon false premises, or is the result of erroneous reasoning, if not of sophistry, or is the conclusion drawn from too limited observations.

In order to arrive at a correct conclusion upon the subject of this symposium, it is necessary that the investigator divest himself of prejudice, ascertain of what the cigarette is made, and then learn the effects, if any, the materials, or their active principles, have upon the body, and finally determine if these are taken into the body in the act of smoking in sufficient quantity to produce effects. In other words:

"In a contemplative fashion,

"In a tranquil frame of mind;

"Free from every kind of passion,

"Let us the solution find."

It will be necessary to draw on scientific works for much of the data, therefore, in order that all may understand, I shall, even in my quotations, substitute English for technical language.

*Read before the Sorority Circle of the Mothers' Congress, as part of a Symposium on "The Cigarette," St. Louis, March 11, 1915.

"In order to make rabbit stew, first catch the rabbit," is a commonly used expression; in like manner, in order to "roast" the cigarette, we must first get a proper "hold" on it, by learning of what the cigarette is composed. As this has been the subject of no little controversy, I have attempted to learn, if possible, the exact composition; that I might have all the available data.

I not only consulted scientific works and articles, but mailed to six of the large manufacturers of cigarettes a request for any literature or facts which would aid me in this work. I received replies from four; three of whom sent me a copy of the same booklet, "The Truth About Cigarettes," and the other referred me to magazine articles. One of those sending a booklet stated the company had another one in preparation and would mail me one as soon as published.

"The Truth About Cigarettes" contains reprints of articles, mostly scientific, originally appearing in scientific magazines. One is a report of an investigation made by one of our leading medical journals, the *London Lancet*, in 1899; others were reports and investigations made by members of the New York Medico-Legal Society in 1897 and 1898.

It, also, contains reports of the findings of a number of chemists of recognized ability who analyzed several different brands of cigarettes, and all reported them free from such poisons as opium, morphine, strychnine and arsenic (substances often stated to be present) or other drugs or poisons foreign to tobacco. though the report of the *London Lancet* states that cigarettes also contain glucose, sugar and glycerine, but concludes with the remark that "the addition is perfectly harmless." This is from the *Lancet* of December, 1899; we shall later quote from the report of a more recent investigation by the same journal on this point.

The wrappers were found to be of excellent quality, mostly rice paper, and free from arsenic, white lead or other poisons. Copper in minute quantity was found in

some Turkish cigarettes, which contained a gilt label printed on the wrapper.

Since I am unable to find anything authoritative to the contrary, I feel we are justified in assuming that cigarettes are usually made of sweetened tobacco and pure paper, though it is possible there are exceptions.

Bastedo's Pharmacology, a very recent text book upon the study of drugs, has the following description of tobacco: "Havana tobacco, noted for its delicate aroma, usually contains one to three per cent. of nicotine; some of the Virginia and French tobaccos may yield from six to seven per cent.

"Examination of Virginia tobaccos by the Virginia Agricultural Experimental Station in 1899, showed 1.68 to 6.17 per cent. nicotine. Turkish tobacco contains about 2.5 per cent. of nicotine."

There is a diversity of opinion as to the amount of nicotine destroyed in the smoking; some investigators finding that only one-fifth is recoverable from the smoke, while others report the recovery of as much as four-fifths.

Contrary to the earlier report of the London *Lancet* made in 1899, a more recent report of that journal made in 1912 states that the sweetening, i. e., sugar or glucose, and probably glycerine, is harmful, in that when it burns, furfural is formed.

Furfural is a constituent of the fusil oil of alcohol, and the London *Lancet* experiments disclose the fact that it is fifty times as poisonous as ordinary alcohol, and that a single cigarette may contain as much of it as two ounces of immature or unripe whiskey. Furfural is practically absent from Turkish cigarettes, but is formed in large amount in the cheapest American cigarettes which are nearly always made of Virginia tobacco, which contains least nicotine and ammonia, but most furfural.

Tobacco smoke, also, contains prussic acid, ammonia and carbon monoxide, the latter of which is about ten times as poisonous as carbonic acid gas, which is normally present in expired air from the lungs. Ammonia, as is well

known, is a powerful irritant to the nostrils, and certainly not less so to the throat and lungs. Prussic acid is one of the most deadly and quickly acting poisons known; a drop on the tongue is almost immediately fatal.

Bastedo further states: "Though tobacco is used externally as a poultice and internally as an emetic, and the smoke inhaled in certain cases of asthma, owing to it being such a deadly poison, and to the great difference in human susceptibility to its action, it is dangerous as a remedy and has, therefore, been omitted from the United States Pharmacopoeia," which, by way of explanation, is an authoritative work upon the preparation, action and use of drugs, which is revised and issued every ten years, under the supervision of a national committee.

Again quoting from Bastedo's work: "Tobacco, combined with other drugs is a constituent of many of the asthma cigarettes and cigars."

Poisonous effects of tobacco are chiefly due to nicotine, of which two drops placed on the tongue or rubbed into the gums of a small dog or cat, will produce death in one or two minutes. A cigar may contain enough nicotine to kill two unhabituated adults.

"The action of nicotine on the body: Its main action is a brief stimulation of the brain and spinal cord, of the nerves governing the action of the heart and of the motor nerves in the muscles, the *stimulation* being followed by *depression*,"—certainly a sufficient cause for a demand of the system for a repetition of its use.

Acute nicotine poisoning is frequently seen after the first cigar or when an unusually large quantity of tobacco is consumed in a short time. The symptoms are, viz., paleness of the skin, sweating, sick stomach, and, perhaps, vomiting, diarrhoea, muscular weakness, faintness, dizziness and weakness of the circulation; for which the treatment is fresh air and rest, lying down, with stimulants, such as aromatic spirits of ammonia, whiskey, etc."

More tobacco can be borne when one drinks liquor at the same time, but in so doing one adds the additional

harmful effects of alcohol upon the body. Tolerance is readily established up to a certain limit, which differs widely with different persons. This does not mean it becomes less harmful to the body, but that the system becomes so habituated to it, that it requires much larger doses to produce acute poisoning.

Again quoting from Bastedo: "As a habit drug, tobacco is peculiar in that the effects desired are not to be attributed in any great degree to its most active constituent, nicotine.

"To the beginner in smoking the pleasure is sadly lacking; but to the habitual smoker tobacco is narcotic, promoting the feelings of ease and relaxation; though its pleasurable effects seem quite unrelated to the extent of its action upon the system, for to most smokers, there is little satisfaction from smoking in the dark, or from using the tobacco in some unaccustomed way, as in a pipe instead of cigarette or as a snuff." However, I have frequently noted that darkening the room for a stereopticon exhibition, is the signal for lighting cigarettes.

"Also," writes Bastedo, "those who have the habit of inhaling, and are, therefore, accustomed to bringing the smoke in contact with a large surface of mucous membrane, get little, if any, satisfaction, no matter how strong the tobacco, unless they inhale to bring the smoke to the accustomed membranes." This, I believe, is generally true.

"Another noteworthy fact," says Bastedo, "is that there is no great physiological demand created, hence the repetition is not so much for the demand of the system to the nicotine, but a mental demand for the satisfaction of the habit. The smoker's pleasure seems to be derived largely from the presence of something in the mouth, from the studied inhalation and exhalation, and from the soft circling up of the smoke. In so far as it is a habit, the smoker may feel ill at ease if he fails to get his usual smoke; yet excessive smoking may be given up at once and absolutely without any rebellion on the part of the body."

This does not harmonize with this author's own words, previously quoted, when he stated that "stimulation of the brain, spinal cord and heart, etc., is followed by depression," which would naturally be a demand for a repetition, or, with the following personal observation of the author:

A number of years ago, a friend, whom I had repeatedly advised to discontinue smoking, finally did so one morning, without my knowledge, and in the afternoon of the same day, sent for me in great haste, as he thought he was dying. I found him gasping for breath and his heart beating forcibly and rapidly, or, as commonly expressed, "going like a trip hammer."

Though, myself, only an occasional smoker, I took a social cigar with him to disarm suspicion as to my object, since he did not connect his condition with its disuse. We talked over his condition, and it was but a few minutes until his symptoms had disappeared. This certainly indicates that there is a demand created by its continuous use, and that the system does become so habituated to the use of tobacco, as to demand it, as is the case with such other similar narcotic drugs as morphine and opium; since, in this case, the system rebelled when deprived of the accustomed smoke and was rapidly readjusted when the need was supplied. This case is, also, evidence that the active principles of the cigar are inhaled in sufficient quantity to produce effects, which is denied by many who admit that tobacco does contain poisonous principles, but contend that they are not present in the smoke.

As further evidence that the poisonous principles do affect the smoker, I would cite the various immediate effects which often follow its use: for example the sick stomach, vomiting, dizziness and faintness, which usually follow the first cigar.

Again, it often acts as a laxative upon those not habituated to its use, and this action usually follows immediately, or very soon, after smoking.

Another condition which may be produced by an unusually strong cigar, even in an habitual smoker, is hiccough. I once witnessed a demonstration of this, in which a cigar which had produced hiccough in one smoker, was taken by a second one, with the remark that "he could smoke anything," and upon causing the same condition in him, the cigar was then taken to a third habitual excessive smoker, who wagered he could smoke it, but failed.

The effects produced upon the system by the prolonged use of tobacco, is more difficult to demonstrate, since there are various incalculable sources of error; among which, is the natural difference in the normal bodily vigor and resistance of different individuals, as shown by one individual living to a "ripe old age" despite the continuous and, perhaps, excessive use of tobacco, as well as the liberal use of alcoholic liquors, while another, having "none of the vices and all the virtues," is "cut down in the hey-day of his youth."

Another source of error is due to idiosyncrasy, by which is meant a peculiarity of constitution whereby substances do not act upon the body in accustomed manner; then may be mentioned conditions growing out of other excesses, dissipation, etc., which may or may not be known to the observer.

In other words, there is a difference between theory, though it be based upon pure science, and practice, or the application of known facts to the variable and occasionally undiscoverable peculiarities of the human organism.

However, the fact that smoking does often have immediate, decided and, sometimes, unpleasant effects upon the body, should be sufficient evidence that its continued use is harmful; since it is a well known fact that anything which causes continuous, or very frequent, disturbances of a part or organ of the body, will eventually produce disease of the part so disturbed.

Another reason why exact data cannot in all instances be obtained, is due to the fact that while tobacco may

not produce disease directly, it may do so indirectly by lowering the normal bodily resistance, thus making it susceptible to the development of diseases, which may have their own specific causes, but which would not have attacked an individual in the "pink of health."

It is generally recognized that there are always present two causes in the development of all diseases: first, the predisposing cause, i. e., the condition of the system; the other, the direct, or exciting, cause. It is only upon this theory that we are able to explain why certain people may not contract contagious or infectious diseases, when exposed to them, or why, failing to contract them at one time, become infected at another.

Careful and prolonged observations of competent and unbiased observers have certainly proven that tobacco smoking does produce certain ill effects and does cause certain diseased conditions. The following list, compiled by Bastedo, appeared in his recent work on the action of drugs, to which we have previously referred, under the heading, "Some of the Effects of Prolonged Smoking."

"1. Derangements of digestion.

"2. Headaches, depressed states of the mind, lack of energy and irritability of temper (from auto-intoxication).

"3. Dimness of vision or loss of sight (technically called Tobacco Amblyopia) from affections of the nerves of sight.

"4. 'Tobacco heart'—rapid, irregular heart action. Heart very susceptible to nervous influence. Sudden death may be caused by high altitudes, and a number of persons with tobacco heart have died in the train, while crossing over the western mountains.

"5. Arterio-Sclerosis (hardening of the arteries) produced in rabbits by nicotine, and by the inhalation of tobacco smoke.

"6. Deafness—either from its effects on the throat, which stops up the tube from the throat to the middle ear, or from its direct effect on the nerve of hearing.

"7. Cancer of the tongue."

Furthermore, "moderate smoking is a mental depressant, favoring ease and comfort, rather than effort and work and energy. It is truly narcotic," i. e., relieves pain and produces sleep.

Though most of these effects from excessive smoking are too well recognized by the medical profession to need further comment, I desire to add some additional evidence regarding some of the more serious conditions.

Of dullness of vision (so called "Tobacco Amblyopia"), a well known text book on diseases of the eye, has this to say: "The patients are almost without exception men, and at, or beyond, middle life. With very rare exceptions, they are smokers, and have smoked for many years, and a large number are, also, intemperate in alcohol."

"In the common cases, in the opinion of an increasing number of observers, tobacco is the sole excitant. It is important to remember that the disease may come on when either the quantity or the strength of the tobacco is increased, or when the health fails and a quantity, which was formerly well borne, becomes excessive."

A recent text-book on nervous diseases states: "Tobacco excessively used is the most common cause of these conditions," i. e., loss of sight and dimness of vision.

I have, myself, seen several cases, which were unmistakably due to tobacco, and so far as I can now recall, they all resulted from cigarette smoking.

"Tobacco heart" is "a condition, not a theory," and not unfrequently comes to the attention of the physician, and, while it begins as a nervous disturbance of the heart, it may result in incurable disease, and I have known death to have resulted directly from disease of the heart, the result of excessive smoking.

Many admit that tobacco smoking in other forms is injurious, but contend that the cigarette is harmless, because of the small amount of tobacco it contains: evidently failing to take into consideration the fact that the cigarette's smoke is nearly always inhaled, i. e., the smoke is drawn into the lungs, and caused

to pass out slowly through the nostrils (a most unnatural smoke pipe, as the novice can easily demonstrate upon himself); consequently, the smoke is in contact with a much greater area of absorbing surface for a much greater length of time; nor do they apparently appreciate the harm which must result from the local irritation of the smoke upon the delicate membrane of these parts.

Though some deny that the smoke reaches the lungs, I have had physicians, from personal experience, contend that it does.

That the smoke contains substances that are irritating to the nose, throat and lungs is evident from the discoloration which is left when the smoke is exhaled through a white handkerchief*, as well as from the stained fingers of the habitual cigarette smoker.

The cigar smoker rarely does more than draw the smoke into the mouth, in which he usually retains it but a fraction of the time cigarette smoke is ordinarily held.

The fact that the cigarette is what is called a "short smoke" is often the excuse for frequent smoking, thus keeping up a more continuous action upon the body than a "longer smoke" less frequently indulged in.

I know of cigarette smokers who smoke between courses at meals, and when they awake nights; probably "awaken to smoke."

In addition to the effects of cigars and smoking tobacco free from sweetening, we have, as mentioned, in the smoke of cigarette tobaccos, furfural, which even in small doses, is said to cause trembling and twitching of the muscles, with inability to control muscular movements, thus explaining the "trembling hand" and so styled "characteristic handwriting" of the cigarette boy, which, however, I have not personally observed. In adequate quantities, furfural is reported to "give rise to fits, resembling epilepsy, and general muscular paralysis,

*Specimens were exhibited to show the discolorations made by both cigars and cigarettes.

ending in paralysis of the muscles of respiration, i. e., muscles which carry on breathing.

One writer says cigarette smoking is the most difficult of the tobacco habits to cure.

The Medical Director* of a large insurance company, in recent articles of advice for its medical examiners and agents, has the following to say:

"The cigarette habit, carried to excess, often produces enough disturbance of the heart to render the applicant uninsurable. Other deleterious results may follow the excessive use of tobacco. Cancer of the lip and tongue may be mentioned in this connection."

All condemn excessive smoking, no matter in what form, but much is said in defense of moderate smoking, which is at best, a relative, as well as an uncertain quantity, since what would be moderate for the average individual, may be excessive to others, that is so far as its effects upon the body are concerned; besides, what may be moderate at one time, may become excessive at another by virtue of unrecognized diminished bodily resistance or failing health.

Furthermore, smoking is, at best, a habit, and, as with all habits, will probably grow, especially if smoking is begun when young, even were it true, as contended by some, that the use of tobacco does not create a bodily necessity for its continued use, which my own observations do not sustain, as exemplified in the case elsewhere reported, of the man who had violent and distressing symptoms when he discontinued its use, and was relieved almost at once by indulging in a single cigar.

Finally, I feel justified in the following conclusions:

1. That tobacco used in excess in any form is harmful to both young and old.

2. That it is impossible to draw a line of demarcation between excess and moderation in smoking, either for individuals or for a given individual at different periods of life, or under varying conditions of health and environment.

*Dr. W. W. Beckett, *Pacific Mutual News*, Jan. and Feb., 1915.

3. That smoking in any quantity is injurious to the growing body and developing mind of the young, in whom there is a strong probability that the habit will grow into dangerous excess.

4. That the cigarette, owing to its composition, small size and usual method of smoking, is the most harmful tobacco habit.

Metropolitan Bldg., St. Louis, Mo.

IS GENIUS A SPORT, A NEUROSIS, OR A CHILD
POTENTIALITY DEVELOPED?*

By JAMES G. KIERNAN,

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(1874-8) and Superintendent Chicago State Hospital
(1884-9)

Fellow Chicago Academy of Medicine, Foreign Associate Member French
Medico-Psychological Association; Honorary Member Chicago Neuro-
logic Society, Honorary President Section of Nervous and Mental
Diseases Pan-American Congress 1893, Chairman Section on
Nervous and Mental Diseases American Medical Asso-
ciation 1894; Professor Neurology Chicago Post-
Graduate School 1903; Professor of Nervous and
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lege 1894-5; Professor of Nervous and
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ment Loyola University 1905;
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Byron's uncongenial relations to his wife have been for years a stock illustration of the alleged genius irritability. Taking this superficial absolute ideal for a guide, repeated texts have been drawn for the comfort of the bourgeois mediocre on the subject. Sidney Low,¹ starting his preachment with the assertion that statisticians might do well to ascertain whether the proportion of the celibates and the ill-married is really as high among cheesemongers and stock brokers as it has been among the poets and playwrights.

He cites, as follows, 68 eminent men of letters as furnishing but a small per centum of happy marriages. The reason for this is that the writer does his work at

*Continued from August, 1915.

home. He sits in his study with his wife, so to speak, outside the door. If she is a discreet lady she does not lift the latch too often. But it is inevitable that the couple shall see a great deal of each other. They take their various meals together, they have opportunities for communication on and off through the twenty-four hours. There is no occasion for the husband to embrace his spouse on the suburban doorstep after breakfast, before he starts to catch the 9:15 train to town. He can caress her all day if he likes. Privileges so easily obtained are not always valued. One has heard the story of the conscientious person who had a painful revelation to make to a married friend. 'I think it my duty to tell you,' he said, 'that I have seen X. kissing your wife.' 'Fancy that!' replied the injured husband; 'and he is not obliged to do it!' And I have been told of a wise virgin who, before marriage, said to her adorer: 'I have only one thing to ask you, and that is that you will promise not to be in to lunch.' But the literary man is often in to lunch. He is 'about the house' most days, and his wife is about him more or less; and if they get on each other's nerves a little, who can be surprised? For the man of action the little drama of domesticity may provoke some interest when it is enacted for him retrospectively; but the literary man has too many opportunities of witnessing it in rehearsal. Not all wives would resist interrupting the composition of an epic by deferring till the late evening the announcement that the cook was drunk, or that the kitchen boiler had burst; not all authors would accept the interruption in the right spirit."

The following are among those cited:

Shakespeare—Married at eighteen, with hasty irregularity, a woman of humble origin, eight years older than himself. The union seems to have been unsympathetic, and the terms of the poet's will point to an estrangement between husband and wife.

Milton—Married three times. The poet's first wife left him after a few weeks. He wrote tracts on divorce

and paid his addresses "to a very handsome and witty gentlewoman" until the wife returned.

Dryden—Married; unhappily.

Bunyan—Married twice; satisfactorily.

Hobbs—Unmarried.

Pepys—Married. Unfaithful to his wife, and frequently quarreled with her.

Samuel Butler—Married late in life.

Newton—Unmarried.

Locke—Unmarried.

Swift—Secretly married to a woman with whom he never lived, and whom he hardly ever saw except in presence of a third person.

Defoe—Married; had several children. Little known of the circumstances of his domestic life.

Addison—Married three years before his death. The marriage "is generally said to have been uncomfortable."

Steele—Twice married; happily, in spite of irregularities of conduct.

Congreve—A bachelor and professional "man of pleasure."

Otway—Unmarried. Life wrecked by an unhappy passion.

Pope—Unmarried.

Prior—Unmarried.

Fielding—Married twice. Devotedly attached to his first wife; after her death married her maid.

Richardson—Unmarried.

Smollett—Married; satisfactorily.

Samuel Johnson—Married a vulgar and affected widow twenty years his senior; marriage considered a grotesque affair by Johnson's friends and contemporaries; childless.

James Thompson—Unmarried.

Gray—Unmarried.

Hume—Unmarried.

Sterne—Married; got on badly with his wife, and had various love affairs and sentimental philanderings.

Adam Smith—Unmarried.

Boswell—Married; frequently unfaithful to his wife.

Goldsmith—Unmarried.

Gibbon—Unmarried.

Sheridan—Married; not unhappily.

Cowper—Unmarried.

Burns—Married a woman who had been his mistress; occasionally unfaithful to her afterward.

Crabbe—Married; satisfactorily.

Bentham—Unmarried.

Wordsworth—Married satisfactorily.

Scott—Married; not quite sympathetically.

Southey—Married twice. First wife became insane. Married his second wife at the age of sixty-six, just before complete failure of his own mental faculties.

Coleridge—Married; unsatisfactorily. Husband and wife became almost completely alienated, and lived apart.

Shelley—Made an imprudent marriage early in life. Separated from his wife who committed suicide.

Keats—Unmarried; tormented by an unhappy love affair.

Byron—Separated from his wife after a great scandal, and entered into various irregular unions.

Charles Lamb—Unmarried.

Hazlitt—Married twice. First wife divorced him; second refused to live with him.

Tom Moore—Married; satisfactorily.

Leigh Hunt—Married; not quite happily.

De Quincey—Married; happily, as far as the husband's habits permitted; wife died at the age of thirty-nine.

Macaulay—Unmarried.

Edward Bulwer Lytton—Separated from his wife.

Newman—Unmarried.

Carlyle—Married; bickered a good deal with his wife.

John Stuart Mill—Unmarried.

Herbert Spencer—Unmarried.

Darwin—Married; satisfactorily.

Ruskin—Marriage annulled.

Landor—Quarreled with his wife, and lived many years apart from her.

Dickens—Separated from his wife.

Thackeray—Wife became insane.

Charles Reade—Unmarried.

Froude—Married; satisfactorily.

Matthew Arnold—Married; satisfactorily.

Kingsley—Married; satisfactorily.

Tennyson—Married, satisfactorily.

Browning—Married; satisfactorily.

Rossetti—Unsatisfactory married life; ended by wife, two years after wedding, dying of overdose of laudanum.

Edward FitzGerald—Separated from his wife.

James Thomson ("B. V.")—Unmarried.

William Morris—Married; satisfactorily.

Walter Pater—Unmarried.

It is obvious that the axiom of verifying your reference has not been followed by Low and he has likewise committed the error of not analysing his statements or statistics. John Stuart Mill, who as elsewhere shown² was precociously pushed by his father, which probably led to a sexual retardation. His relations with Mrs. Taylor, whom he married, Low to the contrary notwithstanding, were ideal. His social sense of injustice led to the famous "Subjection of Womanhood," a gospel of the feminist. Nearman being a Roman Catholic ecclesiastic and Pater having like predilections, necessarily didn't marry. There were excellent reasons for Carlyle's³ bickerings aside from his impotence and his "study isolation."

The sex retarding influence of precocity pushing has been illustrated in the Sidis case, which had been prophesied four years ago.⁴ In a recent interview the young man (now seventeen) remarks:

"I resolved never to marry, following a certain episode that took place in my life. A woman had something to do with it. My oath was taken beneath an oak tree after I had reasoned the whole thing out.

"I had a medal struck off, so that I might remember the vow I took at fourteen. I have no desire to marry or have children.

"The superman can be produced not so much by our plans for eugenics as by changing our system of education. The superman would develop himself automatically provided we started human beings right.

"I have received six proposals of marriage and have refused all. Women do not appeal to me. You speak of a pretty woaaan. It means nothing to me. I cannot understand what a person has in mind when declaiming on what they term beauty."

There is here, it would seem, clear evidence of the adolescent state which Stanley Hall⁵ points out. The remarks on beauty are rather suggestive. The conception of Pepys and Boswell as victims of study isolation seems rather comical to students of literary history. The famous Diary was written in shorthand and hidden. Pepys was notoriously an active pleasure seeker and business man at a notoriously corrupt period, when any type of virtue was a theme of ridicule. Boswell's vanity and egotism would have made him an unhappy mate in any station of life. Johnson's marriage was notoriously happy.⁶ His wife's defects were never apparent to him. He always thought her a pretty creature. Low has a rather peculiar way of judging a happy marriage if the judgment of others (not the husband himself) must be taken. The same is true of Scott's marriage, as I have elsewhere pointed out.⁷ Addison's and Dryden's marriages were rather of convenience than affection and even in a business man such marriages are unhappy. Swift had a sexual defect. The reason for Milton's first unhappy marriage (the others were happy) was a hysteric refusal to allow consummation aggravated by prejudice of the wife's parents (royalists)⁹ against Milton's politics.

The terms of Shakespeare's will are, as I have elsewhere shown, susceptible of other explanations than that of marital estrangement.⁸ Taking Low's figures as they affect first marriages, there are found twenty-

three celibates, four insane wives; twenty unhappy marriages and twenty-one happy. Deducting three cases of sexual defect, the percentage of satisfactory marriages is a little too large to admit of the influence Low has discovered. Deductions on account of female hysteria would probably show as high a percentage of happy marriages as among people in the same station of life.

George A. Coe¹⁰ and Stanley Hall¹¹ have indicated effects of adolescent stress which permanently arrested and expanded into paranoia, as it appeared in the Swedish dramatist Strindberg, just now the vogue. According to Claud Fitch,¹² a translator of his dramas, Strindberg had a struggle with four terrible inner foes all his life: doubt, suspicion, fear, sensuality. His doubts destroyed (according to Fitch who subsequently contradicts this) his early faith. His ceaseless suspicions made it impossible for him to be happy in love or friendship. His fear of "invisible powers," as Strindberg calls them, (really persecutory delusions based upon supposed ability) robbed him of all peace of mind. His sensuality dragged him into the mire.

Here is an unrecognized paranoia based on adolescent stress with logical perversion in the foreground. The anxiety neuroses developing into suspicious states and the egocentricity developing into megalomaniac ideas. Strindberg was the post-marital child of a servant who had previously born three illegitimate children to his father. Relations of this kind have, as Vedeler¹³ and Eklund¹⁴ point out, not quite the same significance in the Scandinavian working class that they do among Anglo-Celtic peoples. The marriage does not seem to have improved the environment of the post-marital offspring. The father was a narrow-minded shop-keeper; the mother was also ignorant and narrow-minded, but kind and affectionate to children. His training during childhood and puberty resembled, but was more trying than, that of Rousseau. Punishment made Strindberg, like the latter, a liar. Like Rousseau, Strindberg had bourgeois characteristics. He criticized all that were above him

in order to observe that it was not so high after all, nor so much worth striving for. Strindberg was thrice married and thrice divorced. He claims that one marriage was the result of a plot by a married pervert.

To judge from Ekhund, Strindberg's free speech on the subject of his seduction is quite natural. Ekhund remarks anent such speech in Sweden: "We rarely hear anyone speak of a woman having been seduced simply because lust is at the worst in the woman, who, as a rule, is the seductory partner." To a certain degree here, as elsewhere, cost and legal difficulty of marriage play a part in these social conditions.

From the first marriage he secured a divorce, he claims, in phrases that remind one of Rousseau's¹⁵ cant about his transgressions. As P. H. Grunnemann¹⁶ points out, he must have been perverse himself to have fallen a victim to this woman and so repeatedly to return to her for "enjoyment of delicate emotions." He once wrote three volumes of auto-biography anticipatory of suicide which he didn't commit. His persecutory delusions made him errabund. He was certainly not a victim of the psychoses called by the much abused term "dementia precox." He certainly was not a dement in any sense of the term. Paranoia developed after the stress of adolescence. The seeming contempt for women of his dramas resembles the tone of certain rouses as well as that of victims of adolescent stress.

There are evidences in current literature that he is to be the head of a cult like Nietzsche. He prepared for this by his "Zones of the Spirit." This, the Norwegian critic, Nils Hjar, says, is "More comprehensive than any modern collection of aphorisms, chaotic as the Koran, wrathful as Isaiah, as full of occult things as the Bible, more entertaining than any romance, keener edged than most pamphlets, mystical as the Cabala, subtle as the scholastic philosophy, sincere as Rousseau's confession, stamped with the impress of incomparable originality, every sentence shining like luminous letters in the darkness—such is the book in which this remarkable writer

makes a final reckoning with his time and proclaims his faith as unconsciously as if he were a descendant of the hero Lutzen." All of which reminds one of the blatant praise of what Nordau called the Nietzsche gang in the early days of German enthusiasm over the discovery of the superman.

Claud Fitch says in englogistic comparison with Nietzsche: "He never relapsed into the great cynicism of the worn out debauchee, nor did he, like Nietzsche, try to explain away conscience as an old wives' tale. Conscience perpetually tormented him and finally drove him back to believe in God, nor the collective Karma of the Theosophists which expressly repudiated nor to any new good expounded in New Thought magazines, but to the transcendent God who judges and requites.

Nietzsche, unlike Rousseau and Strindberg, evidently never suffered from the adolescent morbid obsession of a conscience. The religious revival in Strindberg was an unrecognized phase of the sexuality which Grunne-mann depicts. As E. C. Spitzka¹⁷ and Macaulay¹⁸ state, Bunyan suffered from all the stress of adolescence, but made a complete recovery. Bunyan, however, had a healthier mental back-ground. His married life was happy and there was present an element of the secondary ego, absent in Nietzsche, Strindberg and Rousseau. As E. C. Spitzka¹⁷ remarks, in Bunyan's case logical perversion was in the back-ground.

Adolescent stress, as George Coe¹⁹ and Stanley Hall²⁰ pointed out, produces what Sir Walter Scott²¹ finely designated the forced impudence of the bashful. This often is in evidence in the social revolts of conventionally unconventionalals.

A British newspaper writer has lately startled Great Britain and Ireland by pointing this out in Bernard Shaw.²² The writer admits that „this assertion that Mr. Shaw is a shy man may excite laughter, but it is a true one. I have seen him blush upon entering a room full of strangers. When he greets you there is a certain hesitation in his manner, as if he were anxious to run

away and hide. When he is in a crowded place, he seeks some obscure seat, and remains there until it is time to go home. Mr. Shaw can talk entertainingly on occasions, but in the main he reserves his conversation for his plays, and it is this fact, as much as any, which shows that he is a shy man. The talk is there, but he is too hesitant to say it, so he writes it. The good talker is a man without reserve. He must denude himself of reticence, and he must hold his auditors in contempt. It is essential that the brilliant conversationalist should be an arrogant man, that he should take up the position of one who is not arguing with you, but is a-telling of you, and he can only do this by assuming, rightly or wrongly, that the views of those who listen to him are negligible. Mr. Shaw might like to monopolize speech, but he is too shy to do so. It is possible that he might like to take up the 'I am a clever man' attitude in private life, but the very nervousness which makes him do it in public probably prevents him from doing it in private. His humility becomes more apparent as he grows older. When he argued with Mr. Belloc about the Servile State, he stood up and said, 'I am a servant.' The bigger a man is the more willing he is to serve. It is the newly freed slave who is most perturbed about his rights. It is the bondman who wants to do what he likes. The man who has made himself free of all men is always willing to stand aside or to say, 'I am a servant.' It is so with Mr. Shaw. His career is full of service to one cause or another. He has addressed big crowds and little crowds, done big work and donkey work, submitted willingly to the drudgery of committees and campaigning for the sake of Socialism at times when the call of his own work was insistent. He has worked and spoken for little men, and been content with a second place while they had the first. His industry is terrifying; his generosity is astonishing. No man has ever seen his name in a list of subscribers to charity, but there are dozens of men in England, poor workers for art, who have been helped by him. His chivalry and loyalty are quixotic;

he will fight for a friend far more keenly almost than the friend will fight for himself. He pays tribute to men frequently far in excess of their deserts, and gives advice and assistance to those who need them even at inconvenience to himself."

Iatrophobia of decidedly sophomoric adolescent type appears in the "Doctor's Dilemma." Here is depicted a surgical charlatan who violates all ethics of the medical profession, but is set forth as typical of it. Much of Shaw's work is a sophomoric unconventionally conventional revolt of immature manhood. Here he aligns with the Anglo-Saxon philistine rather than with the Anglo-Celt, as whom he poses. A similar tendency appears in Retif de la Bretonne, well known as a pornographic writer and whom C. Lombroso²³ pictures as a typical genius precocity. He had read much at four; seduced girls at eleven, and at fourteen composed a poem on his first twelve mistresses. He, at the age of nine,²⁴ passed for a Narcissus, but his thoughts as soon as he was alone by night or day, had no other object than the sex he seemed to flee from. This was a combination²⁵ of sensitive precocious ardor and excessive shyness. Data about early awakening of sexual ardor are rather lacking. The reports about this in connection with legislation about the age of consent led the New York legislature to fix it ten for the boy and eight for the girl as being the lowest age when parenthood became possible. The object of the law was to protect the coming child by giving father and mother the right to consent to marriage. The fate of the illegitimate child is lost sight of in later legislation. Of course details are lacking as to anything but capacity for parenthood. Later researches show that boys are often seduced by women at early ages. Sometimes this is done for maternally protective reasons against the consequences of masturbation or as prophylactic against acquiring venereal contagion from harlots. Louis XIV²⁴ was seduced at fifteen by a maid of Anne of Austria's bedchamber. Wolbart²⁵ reports the cases of boys of 4, 10 and 12 years seduced by girls of from 10

to 12. In one case a girl of 12 forced the boy. In France (where female responsibility is more easily established under the Napoleonic code than it is in England or English speaking countries) there were from 1874-84, according to P. Bernard,²⁶ 181 women between 20 and 30 convicted of assaults on boys under 15. Alleged sexual precocity in genius would hence not appear to vary widely from sexual awakening in the general population.

(TO BE CONTINUED.)

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THE COLLOIDAL GOLD TEST IN PSYCHIATRIC CASES.

A Report of 126 Spinal Fluids.

By FREDERICK C. POTTER, M. D.,

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Read before Marion Co. (Indianapolis) Ind. Medical Society,
May 18, 1915.

TODAY the examination of the cerebro-spinal fluid is essential in the study of most of the psychiatric cases. In this institution the blood serum of all patients is examined for complement deviating body, as soon after admission as possible. When the blood serum gives a positive Wassermann reaction or when the history or clinical examination of the patient suggests lues as an etiological factor in the psychosis, lumbar puncture is done.

The difficulty of differentiating cerebro-spinal syphilis and early paresis is well known and it was with the hope that the colloidal gold reaction of Lange would help us in this matter that the work, the report of which follows, was undertaken in June, 1914.

In 1857, M. Faraday¹ noted that the addition of an electrolyte to a solution of colloidal gold caused an immediate change in color, but it was not until 1901 that Zsigmondy² laid the foundation for the present test, when he successfully used colloidal gold for the quantitative estimation of protein substances. He found that solutions of protein give protection to colloidal gold solution up to a certain point, and later determined the "Goldzahl" (i. e. the number of milligrams of protein just sufficient to prevent the precipitation of 10 c.c. of .0053% colloidal gold in the presence of 1 c.c. of 10% NaCL solution) of many proteins.

In 1912, Lange³ attempted to apply Zsigmondy's method to the study of the proteins in spinal fluid but found that instead of giving protection to the gold solution, the reverse occurred, especially where the spinal fluid contained an abnormal amount of protein. Briefly, Lange found that when the globulins and nucleoproteins in spinal fluid are held in solution by a .4% NaCl solution, which in itself is not sufficiently strong to cause precipitation of the gold, a characteristic change of color is noted in the colloidal gold solution in certain diseases of the nervous system.

In his first report, Lange described the results of this test in 18 cases of general paresis with 18 positive curves in a dilution of 1:40 and 1:80, also 17 cases of cerebro-spinal syphilis which all showed a characteristic curve, and 20 tabetics, 19 of whom gave a positive curve in 1:40 to 1:80 dilution.

Grulee and Moody⁴ have reported 9 cases of clinically congenital syphilis with the most marked reaction occurring in 1:40 and 1:80 dilutions, and 7 cases of suspected congenital syphilis giving similar results in 5 cases; also 8 non-luetic cases where the results varied, and later these authors⁵ in a study of 18 cases of congenital syphilis; 12 cases of suspected congenital syphilis; 4 congenital luetic cases with a paretic-like reaction; 8 cases of tubercular meningitis; 11 varied cerebral conditions, and 11 miscellaneous conditions, concluded first, that in congenital lues the spinal fluid reacts with a marked degree of regularity in dilution of 1:40 and 1:80 and that this reaction is only simulated in those conditions which show a slight inflammation of the meninges or brain, and are not likely to be confused clinically with syphilis; second, in tubercular meningitis, the reaction is most marked in dilution 1:160 and 1:320.

Miller and Levy⁶, report 49 cases of general paresis, all giving a gold curve in the paretic zone, 10 cases of congenital lues, 8 of which gave results in the luetic zone; 5 secondary luetic cases, 4 with resulting luetic zone curve; 11 tertiary cases showing luetic zone curve;

10 tabetics, and 13 out of 15 cerebro-spinal luetic cases with resulting curves definitely within the luetic zone. Their 71 cases classified as miscellaneous, purulent and tubercular meningitis, gave inconstant results.

Lee and Hinton⁷, report 12 cases of general paresis; 24 of tabes; 10 of cerebro-spinal lues; 3 of cerebral lues; 4 of spinal lues, all of which gave a typical reaction for syphilis.

DeCrisis and Frank⁸ obtained constantly positive results in 120 cases of paresis, tabes, cerebral and spinal syphilis.

Solomon and Koefod⁹ report 20 characteristic paretic reactions out of 25 cases; of 12 cases of congenital syphilis, only one, a case of juvenile paresis, gave a marked reaction; of 33 cases with positive Wassermann reaction in blood serum and not diagnosed syphilis of the nervous system, 30.3% gave some reactions in the syphilitic zone; of 53 cases with negative Wassermann reaction and no clinical evidence of syphilis, 33.9% gave a reaction in the syphilitic zone.

Brock¹⁰ reports 50 cases of general paresis, 40 of which gave a typical paretic curve.

Kaplan and McClelland¹¹ report 19 cases of general paresis with 19 characteristic curves; 5 paretic curves in 5 cases of taboparesis; 8 positive reactions out of 36 cases of tabes; 15 positive and 13 negative reactions in 28 cases of cerebrospinal lues; 1 positive (multiple sclerosis) and 27 negative reactions in 28 non-luetic cases.

Eicke¹² reports the typical reaction in 22 of 24 tabetics, and in 54 general paretics, and states that the test is especially valuable in differentiating early general paresis and neurasthenic disturbances in a luetic.

Moody,¹³ while demonstrating the reaction before the Chicago Neurological Society, stated that in over 300 cases the colloidal gold ran parallel with the Nonne test and bore such a constant relation to the Wassermann reaction that he could predict the result of the Wassermann reaction from the colloidal gold curve. However,

in summing up the discussion, he states that other tests as well as the clinical diagnosis must be considered.

Solomon and Wells,¹⁴ in a study of 26 post mortem fluids with this method found that the results are comparable to those obtained antemortem on similar cases if the body is well preserved and the fluid obtained early.

Weston, Darling and Newcomb¹⁵ in a report of 239 examinations of spinal fluid from 198 patients suffering with mental diseases, found an almost constant paretic curve in 3 cases of cerebro-spinal syphilis and 34 cases of general paresis. In 161 cases of dementia praecox, manic-depressive insanity, epilepsy, arterio-sclerotic insanity and unclassified psychoses, 8 cases gave a gold curve within the limits of the luetic zone and one, a possible case of general paresis, a paretic zone curve.

Swalm and Mann,¹⁶ reporting the results of 135 examinations of spinal fluid on 111 patients suffering from a psychosis, found 88.5% paretic curves in 70 clinical cases of general paresis; 2 of 4 cases of tabes gave a curve in the luetic zone; of 10 cases of cerebrospinal lues, 6 gave a luetic zone curve.

V. Kafka¹⁷ recently discussing the cerebro-spinal fluid in diagnosis, states that in his experience the findings with the goldsol test were often contradictory and the result with this test should not be heeded unless it confirms the results from other tests.

The technique and materials used are as follows:

1. Double distilled H_2O , (distilled over glass without rubber connections to insure chemical purity.)
2. 1% solution chloride of gold (Merck) in double distilled H_2O .
3. 2% potassium carbonate (Merck) in double distilled H_2O .
4. 1% solution Formalin (commercial) in double distilled H_2O .
5. 0.4% solution NaCL C. P. (Merck) in double distilled H_2O .

Experience has taught us that this NaCL solution should be freshly prepared each time a set of fluids are to be examined, as old NaCL solution gives end reactions which are not as clear as when the solution is fresh.

6. Jena flasks (2000 c.c.) seem to us to be easier to handle in making up the gold solution, than the beakers recommended by other authors.

7. Clean sterile 1 c.c. pipettes, graduated to the tip in tenths, 10 c.c. pipettes graduated in c.c.'s, and chemically clean and sterile test tubes 100x15 mm.

All glass must be free from acids, since acids, even in very weak solution, precipitate the gold solution; from alkalis because they protect the gold solution and do not allow the proteins to reduce it. We have found it best to wash all glassware coming in contact with the gold solution with strong nitrohydrochloric acid, followed by tap and distilled H₂O, and thorough drying before sterilization. We have sets of test tubes, flasks and pipettes which are used only in this test.

In preparing the reagent, the only really difficult part of the test, our procedure is as follows:

Place 1000 c.c. (or any multiple thereof) of fresh double distilled H₂O in a large Jena flask and heat slowly to 60°C., add as quickly as possible 10 c.c. (i. e., 1 c.c. to each 100 c.c. double distilled H₂O) each of the 1% gold chloride solution and the 2% potassium carbonate solution. Heat as rapidly as possible to 95°C. (control by a clean thermometer,) agitating constantly as the temperature nears this point. Now remove from flame and add, a few drops at a time, 10 c.c. (i. e., 1 c.c. to each 100 c.c. double distilled H₂O) of 1% solution formalin, with constant agitation. A play of colors resulting in a brilliant, clear red solution is obtained. All solutions not meeting the requirements for a standard colloidal gold solution as laid down by Miller and Levy⁶, have been rejected. In addition to this, each fresh solution has been tested with one or two spinal fluids giving

a known curve with a former gold solution. It is absolutely useless to attempt to "doctor up" a solution not meeting the above requirements.

Technique of test:

10 clean and sterile test tubes are placed in a rack and numbered from one to ten; 1.8 c.c. of fresh .4% NaCL is placed in tube No. 1 and 1 c.c. NaCL solution in each remaining tube. .2 c.c. of spinal fluid is added to tube No. 1 and thoroughly mixed, giving a dilution of 1:10, after which 1 c.c. is transferred to tube No. 2, giving a dilution of 1:20. This is repeated with each succeeding tube making a series of dilutions ranging from 1:10 to 1:5120. 5 c.c. of the gold reagent is added and the tubes quickly agitated. A control tube containing 1 c.c. of .4% NaCL and 5 c.c. of gold solution is set up with each group of fluids. Final readings are made at the end of 20 to 24 hours, and always by strong daylight, the tubes being left at room temperature.

Reports have been made in figures representing colors:

No. 0—red, original color.

No. 1—red-blue.

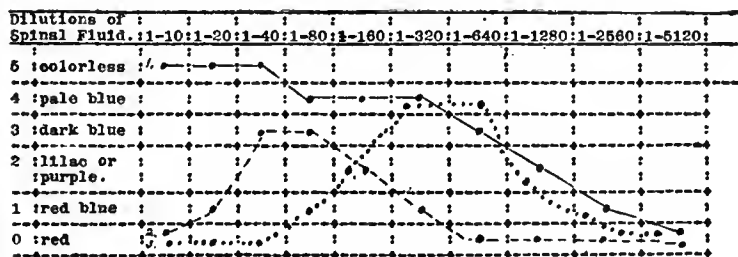
No. 2—lilac or purple.

No. 3—dark blue.

No. 4—pale blue.

No. 5—colorless.

For typical curves see diagram.



1. — — — — — Paretic Curve.

2. - - - - - Syphilitic Curve.

3. Meningitic Curve.

ROUTINE FOLLOWED IN STUDY OF SPINAL FLUIDS.

All spinal fluids reported have been examined as soon as possible after being withdrawn (cell counts were made with the Fuchs-Rosenthal chamber, always within an hour after withdrawal; the globulins, tested by Noguchi's butyric acid, Ross ammonium sulphate, Pandy carboic acid and Kaplan's butyric acid and ammonium sulphate methods, and the Lange gold test, within three to five hours after removal.) The Wassermann reaction was done with two antigens (one alcoholic extract of normal liver and the other, alcoholic extract of beef heart reinforced with .4% cholestrin,) spinal fluid used in dilutions of .05, .1, .2, .4, .6 and .8 c.c., in 12 to 36 hours after removal.

No spinal fluids containing blood have been reported, as experience has taught us that the presence of a few red cells varies the reading of the gold curve.

The blood serum Wassermann reaction has been done with the same antigens as the spinal fluid, the serum used in .1 and .2 c.c. doses with anticomplementary and antishoop amboceptor controls equal to the largest dose of serum used. The complement and amboceptor have been titrated on the day they were used. A 5% suspension of sheep cells, in .85% NaCL was used as an indicator.

The tabulated results may be summarized as follows:—

Table No. 1. Paresis

No.	Blood W. R.	SPINAL FLUID				Remarks
		W. R.	Globulins	Cell Count	Biopsy Colloidal Gold	
1	+2	+2.05	Positive	33	5 5 5 5 5 3 0 0 0 0	
2	+4	+4.05	??	32	5 5 5 5 5 5 3 2 0	
4	+3	+4.1	??	32	5 3 3 5 4 3 0 0 0 0	
5	+3	+4.2	??	67	5 5 5 5 5 5 2 2 0 0	
6	+4	+4.05	??	126	5 5 5 5 5 4 2 0 0 0	
7	—	+4.05	??	46	5 5 5 4 3 2 1 0 0 0	
8	+4	+4.1	??	49	5 5 4 4 3 2 2 2 2 2	
10	+4	+4.4	??	49	5 5 5 5 4 4 1 0 0 0	
11	+4	+4.05	??	31	5 5 5 5 5 5 3 1 0 0	
14	+4	+4.05	??	88	5 5 5 4 2 2 1 0 0 0	
15	+2	+4.2	??	104	4 5 5 5 4 1 1 0 0 0	
17	+3	+4.05	??	34	5 5 5 5 5 5 4 2 1 0	Intracerebral Biopsy on Post mortem Exam.
18	+2	+4.05	??	35	5 5 5 5 5 5 2 1 0 0 0	
19	+2	+3.6	Weak Positive	70	5 5 5 5 4 2 2 0 0 0	
21	+4	+4.1	Positive	35	5 5 5 5 5 5 2 1 0 0	
22	+3	+4.05	??	74	5 5 5 5 3 1 0 0 0 0	
23	—	+4.1	??	16	5 5 5 5 4 3 2 0 0 0	
25	—	+4.1	??	56	5 4 4 3 3 2 1 0 0 0	
26	+4	+4.1	??	148	5 5 5 4 4 5 2 0 0 0	

Table 7. (continued)

No	Band WR	Spiral Flitch				Remarks
		W. R.	Blchms	Cell Count	Range Coloidal Feld	
27	+4	+4 .05	Positive	31	5 5 5 4 4 1 1 0 0 0	
29	+4	+4 .1	"	444	4 4 4 5 5 3 3 0 0 0	
30	+4	+4 .00	"	96	5 4 5 5 5 5 3 1 0 0	
32	+3	+4 .2	"	23	5 5 5 4 2 0 0 0 0 0	
33	+4	+4 .2	"	35	4 2 4 3 3 3 2 1 1 0	
34	+4	+4 .1	"	28	5 5 5 5 3 3 2 1 0 0	
36	+2	+4 .4	"	36	5 5 5 5 5 4 3 2 0 0	
37	+4	+4 .05	"	306	5 5 4 4 4 4 3 2 0 0	
38	+2	+4 .4	"	28	5 5 4 2 4 2 0 0 0 0	
39	+3	+4 .1	"	63	5 4 4 5 5 4 2 0 0 0	
41	+1	+4 .4	"	49	5 4 5 3 0 0 0 0 0 0	
42	+4	+4 .05	"	232	5 5 4 5 4 2 0 0 0 0	Range in Dr. Sect. all comparative to each other
43	-	+4 .2	"	106	5 5 3 3 3 2 1 0 0 0	
44	+4	+4 .1	"	6	4 2 3 3 3 3 1 0 0 0	
46	+4	+4 .1	"	35	5 5 5 4 4 3 1 1 0 0	
47	+4	+4 .1	"	66	3 5 5 5 5 3 2 1 0 0	
50	+3	+4 .1	"	82	5 4 3 3 3 1 0 0 0 0	
51	+4	+4 .2	"	36	5 5 5 5 1 1 0 0 0 0	
52	-	+4 .4	"	23	4 5 5 4 3 2 1 0 0 0	

Table 1 (continued)

No	Blood QNR	Spinal Fluid			Remarks
		W-R	Schulzberg Test	Langé Colloidal Gold	
53	+2	+4 .05	56	5 5 5 5 4 3 1 1	
54	+3	+4 .1	8	5 5 5 5 4 3 1 1 0 0 0	
55	+4	+4 .1	95	5 5 5 5 4 3 2 0 0 0	
57	+4	+4 .05	225	5 5 5 5 3 3 1 0 0 0	
58	+2	+4 .1	20	5 3 4 3 3 0 0 0 0 0	
60	+4	+4 .1	184	5 5 5 5 5 5 3 2 1 0	Spinal drawn during series of convulsions
63	+4	+4 .2	11	4 5 5 5 5 3 0 0 0 0	Spinal drawn postmortem
65	+4	± .8	Negative	2 3 4 4 3 2 0 0 0 0	
66	+4	+4 .05	165	5 5 5 5 2 0 0 0 0 0	
67	+4	+4 .06	117	5 5 5 5 5 4 3 2 1 0	
69	+4	+4 .05	80	5 5 5 5 5 5 3 1 0 0	
75	+4	+4 .2	42	5 5 5 5 4 3 3 2 1 0	
76	+3	+4 .4	3	5 5 5 5 4 3 2 2 1 0 0	
78	+4	+4 .05	65	5 5 5 5 4 3 3 2 0 0	
87	+4	+4 .05	55	5 5 5 5 5 5 3 2 1 0	
88	+4	+4 .2	188	5 5 5 5 4 4 3 0 0 0 0	Spinal drawn postmortem fluid
89	+4	+4 .2	30	4 5 5 5 5 4 4 1 1 0	" " " "
90	+4	+4 .05	11	5 5 5 5 5 5 4 3 2 0 0	
91	+4	+4 .1	47	5 5 5 5 5 5 4 3 2 0 0	

Table 1 (continued)

No	Band No.	Spiral Third				Remarks
		W.R.	Shells	Cell Count	Longi Collected 2nd	
92	+3	+4.1	Portia	94	5 5 5 5 5 5 4 3 2 0	
93	+4	+4.05	"	79	5 5 5 5 5 5 3 2 1 0	
94	+4	+4.2	"	29	5 5 5 5 5 5 3 0 0 0	
95	+4	+4.05	"	44	5 5 5 5 5 5 5 2 0 0	
97	+4	+4.1	"	21	5 5 5 5 5 5 4 1 0 0	
98	+4	+4.05	"	17	5 5 5 5 5 5 4 2 1 0 0	
99	+4	+4.2	"	11	5 5 5 5 5 5 4 3 1 0 0	
101	+4	+4.4	"	26	4 4 4 4 4 4 2 1 0 0 0	
103	+4	+4.2	"	41	4 5 5 5 5 5 3 1 0 0 0	
105	+4	+4.05	"	120	5 5 5 5 5 5 2 2 1 1 0	
106	+4	+4.05	"	51	5 5 5 5 5 5 3 1 1 0	
108	+4	+4.1	"	341	5 5 5 5 5 5 5 2 0 0	
113	+4	+4.1	"	86	5 5 5 5 5 5 4 3 2 1 0 0	
114	+4	+4.05	"	38	5 5 5 5 5 5 5 4 3 2 0	
115	+4	+4.05	"	28	5 5 5 5 5 5 5 3 2 0 0	
116	+4	+4.05	"	140	5 5 5 5 5 5 5 4 3 1 0	
117	+4	+4.05	"	212	5 5 5 5 5 5 5 5 3 2 1 0	
120	+4	+4.05	"	44	5 5 5 5 5 5 5 5 4 2 0 0	
122	+3	+4.05	"	140	4 4 3 4 4 4 4 3 4 3 2	Black Throat Tanager

Table 2. *Quechospinal Syphilis.*

No.	Blood H.R.	Spinal Fluid.			Remarks.
		H.R.	Shobunk Cell Count	Large Colloidal Gold	
3	+4	+4.05	19	5 5 4 4 3 2 0 0 0 0	
13	+4	+4.1	68	2 4 4 4 3 3 2 1 0 0	
16	+4	+4.4	250	2 3 3 3 3 1 0 0 0 0	
20	+2	+4.2	80	3 3 3 3 3 2 2 2 1 1	
24	+4	+4.05	142	2 2 2 2 1 0 0 0 0 0	
43	+4	+4.1	13	3 3 3 2 3 1 0 0 0 0	
70	+2	+4.2	48	3 3 3 3 3 2 0 0 0 0	
73	+4	— .8	11	2 3 3 3 2 2 1 0 0 0	
77	+3	+4.1	53	1 2 2 2 2 4 4 2 2 0	
82	+2	— .8	7	3 3 3 3 3 2 1 0 0 0	
83	+1	— .8	2	1 2 3 3 3 2 2 0 0 0	
102	+4	+4.4	14	1 1 1 1 1 0 0 0 0 0	
112	+4	+4.4	53	1 1 2 3 3 3 1 1 1 0	
119	+4	+4.3	255	2 4 5 2 3 3 3 2 1 0	
128	+4	+4.2	65	1 1 2 2 3 2 2 1 0 0	

Table 4. Miscellaneous Psychoses (continued)

Lab 4 - Macdonald Psychiatric Hospital							
No	Blood Ct. N.	General Thuid.					Remarks
		C.R.	Blushing Bell Count	Large Colloidal Field			
125	+4	- .8	Register	8	0 0 1 1 0 0 0 0	Manic Depressive	
64	+2	- .8	"	3	0 0 0 0 0 0 0 0	Paranoid.	
124	+2	- .8	"	1	1 1 2 2 1 0 0 0 0	"	
61	-	- .8	"	2	1 1 1 1 0 0 0 0 0	Psychopathic constitution	
94	-	- .8	"	5	1 1 1 1 0 0 0 0 0	Delusional hypochondria	
119	-	- .8	"	3	1 1 1 1 1 0 0 0 0	Delusional character	
96	+4	- .8	"	4	1 1 1 1 1 1 0 0 0	Stuttering Church	
79	-	- .8	"	5	1 1 2 2 1 0 0 0 0	Organic Psychosis	
80	-	- .8	"	15	0 0 2 2 2 2 0 0 0	" "	
84	-	- .8	"	2	1 1 1 1 0 0 0 0 0	" "	
62	+3	- .8	"	6	1 1 1 0 0 0 0 0 0	Delusional character	
104	+1	- .8	"	6	1 1 1 1 1 0 0 0 0	" "	
111	-	- .8	"	7	1 1 1 1 0 0 0 0 0	" "	
68	+3	- .8	"	5	1 1 1 1 0 0 0 0 0	Delusional character	
72	-	- .8	"	8	0 0 0 0 0 0 0 0 0	" "	
118	+4	- .8	"	5	0 0 0 0 0 0 0 0 0	" "	
121	+3	- .8	"	3	0 0 1 1 0 0 0 0 0	" "	
127	-	- .8	"	12	0 0 0 1 1 0 0 0 0	" "	
31	-	- .8	"	52	0 0 0 1 2 3 3 2 1 0	Delusional character, blood count in spot count.	

Of 78 cases diagnosed clinically as general paresis (Table 1), 61 cases or 78.2% gave a reaction in the paretic zone, i. e. the first three to six tubes giving a characteristic water clear "5" reaction. 10 cases, 12.8% (Nos. 4, 8, 25, 29, 37, 38, 41, 43, 52 and 99) gave a curve which while not absolutely typical of the paretic curve, is very suggestive and should be included with the 61 cases, making 71 or 91%. The remaining 7 cases (9%) gave curves in the luetic zone, i. e. the first four to five tubes showing a precipitation which usually does not exceed a "4" reaction. Of these last seven cases, the diagnosis in one (No. 58) was confirmed by autopsy; one (No. 65) had a strongly positive Wassermann reaction in the blood serum, a doubtful positive Wassermann reaction with .8 c.c. spinal fluid on two occasions; two cases (Nos. 50 and 122) died after a typical course of the disease; the remaining three cases (Nos. 33, 44 and 101) are living and present the usual clinical picture of general paresis. Five or 6.4% of this group (paresis), Nos. 7, 23, 25, 43 and 52, gave a persistently negative Wassermann reaction in the blood serum with a strongly positive Wassermann reaction, increased proteins and cell count in the spinal fluid.

The cases included in the 91% of positive findings with the colloidal gold all showed an increase in the globulins and an average cell count of 81.5 per c. mm. The spinal fluid from 32 cases, 45.07%, gave complete inhibition with .05 c.c.; 19 cases, 26.7% with .1 c.c.; 12 cases, 16.9% with .2 c.c.; 6 cases, 8.4% with .4 c.c.; 1 case, 1.4% each with .6 and .8 c.c.

Five of the fluids (Nos. 17, 42, 63, 88 and 89), giving the typical paretic curves, were drawn three to five hours after death.

Of the 15 cases diagnosed clinically as cerebro-spinal syphilis, (Table II,) 12 cases or 80% gave a reaction within the luetic or meningitic zone and one case (No. 3), was definitely in the paretic zone, (possibly a case of paresis in remission.) The other two cases (Nos. 24 and 102) both gave a strongly positive Wassermann reaction

in the blood serum and spinal fluid, with positive tests for globulins and a cell count of 142 and 14 respectively. In four of these cases, there was a well marked "*Verschiebung nach oben*," a term introduced by Lange, indicating a reaction maximum in the higher dilutions. All of these cases gave a positive Wassermann reaction in the blood serum and 12 a positive Wassermann reaction in the spinal fluid with increased globulins and an average cell count of 90 per c. mm. The three cases, (Nos. 73, 82, 83,) with a negative Wassermann reaction in spinal fluid, gave negative or weakly positive globulin tests and had an average cell count of 6 plus.

Of four cases of *Tabes* (Table III) 2 or 50%, 11 gave a suggestive luetic curve. This number of cases is too small to draw any definite inference from it.

Of the 29 miscellaneous cases (Table IV), whose spinal fluids were studied either on account of suggestive physical findings or history, 13 gave a negative Wassermann reaction in the blood serum and spinal fluid; one (No. 49), a positive serum and spinal fluid reaction; one, (No. 107), a positive serum and a doubtfully positive reaction with .8 c.c. spinal fluid; the remaining 14, a positive Wassermann reaction in blood serum and negative reaction in the spinal fluid. The gold curve varied greatly in these cases. In one clinical case of *dementia praecox* (No. 49), the reaction would suggest a luetic meningitis; one case (No. 81), clinically manic-depressive psychosis, with a left facial palsy which cleared up later, the gold curve would lead one to consider an acute basilar meningitis, involving the fifth and seventh nerves as its cause; one case (No. 31) of tuberculous spondylitis (necropsy), in which the spinal fluid was drawn twenty minutes after death, a typical reaction, maximum in dilutions of 1:320 and 1:640, was obtained. In the remaining cases, most of the gold reactions were too irregular to admit of any definite interpretation.

In the majority of cases reported there is a marked agreement between the Wassermann reaction, the globulin reaction and the Lange test, which leads us to agree with

Moody in his statement that the result of the Wassermann reaction may be foretold from the gold test.

It is also to be noted that of the 78 cases diagnosed clinically as general paresis, 93.5% gave a positive Wassermann reaction in the blood serum and 96.1% gave a positive Wassermann reaction with .4 c.c. or less of spinal fluid.

CONCLUSIONS:

1. It is absolutely essential that the directions laid down for the preparation of the reagent be followed exactly and that all glassware be absolutely clean and free from either acids or alkalies.

2. The Lange colloidal gold reaction is an aid in the diagnosis of general paresis, when used in conjunction with the results of the Wassermann reaction on the blood serum, and the Wassermann reaction, the cell count and protein estimation in the spinal fluid, as well as the careful study of the case clinically.

3. This test is of value in confirming a clinical diagnosis by examination of the spinal fluid three to five hours after death.

I desire to express my appreciation to our Superintendent, Dr. George F. Edenharter, for the privilege of doing this work and to Dr. Max. A. Bahr and the staff physicians who have co-operated by furnishing the clinical diagnoses.

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ZIEHEN'S CONCEPTION OF ACUTE HALLUCINATORY PARANOIA (AMENTIA)*.

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EVER since the fundamental conception of paranoia was laid by such writers as Westphal, Esquirol, Mendel, and many others, and especially in recent years by Kraepelin and Ziehen, this subject has been one of the most interesting in the realm of psychiatry.

Since the earliest conception of the disease, there have been many stages of transformation and many variations, and no little confusion has resulted from the diverse opinions of men who have made the most careful and scientific analysis.

Kraepelin's recent "paraphrenia," which forms a subgroup of endogenous dementia and in which, during the height of the disease, delusional ideas and hallucinations are the prominent symptoms, has attracted considerable attention in the recent literature of psychiatry. Kraepelin's paraphrenia simulates in many ways his dementia praecox but there is none of the characteristic disturbance of the emotion and volition to the extent of bringing about disintegration of the personality.

Ziehen's acute hallucinatory paranoia or "amentia," as he terms it, is an acute functional psychosis, whose dominating symptoms are hallucinations and illusions. Out of the hallucinations and illusions, delusional concepts develop.

In the typical form, all primary emotional disturbances and association disturbances are wanting. Secondary

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emotional disturbances which correspond to the content of the hallucinations (e. g., the fear of threatening voices) and secondary association disturbances (e. g., secondary flight of ideas in consequence of massive accumulation of sensory deceptions) are very frequent. In the same manner, the disturbances of action in the typical form, are exclusively dependent upon the hallucinations and delusional concepts springing from them.

Corresponding to the differences of opinion mentioned, the most variable names have been given to acute hallucinatory paranoia. Some still in use at the present day, are, for example, "hallucinatory insanity" (Fürstner), "hallucinosi" (Wernicke), "acute hallucinatory delusion" (Krafft-Ebing), "Amentia" (Meyert), etc. In reference to the secondary hallucinatory incoherence, "acute hallucinatory confusion," or "distraction" has also been spoken of (Fritz and Conrad).

In reference to a frequently demonstrable etiological factor an "aesthetic confusion" (Mayser) has also been spoken of. The designation amentia is best reserved for those cases which are connected with severe primary incoherence.

The cardinal symptoms of hallucinatory paranoia are the sensory deceptions, hallucinations as well as illusions. Visual deceptions generally predominate. The majority of the hallucinations are to be included amongst "the mediate ones," that is those in which the content of the hallucination does not generally correspond to the actual concept of the patient at that moment.

The hallucinations also stand in no intimate connection with each other.

Often the sensory deceptions are so massive and so changing, that every orientation by the patient is impossible. The content of the sensory deceptions is extremely variable. Flames, grimaces, shadows, and naked forms, predominate, amongst the visions; threats, calls for help, harsh words, complaints, fire alarms, explosions,

amongst the akoasma. The floor sways under the patient, so that he believes he is in a ship. Everything turns in a circle about him.

The real objects as well as the hallucinatory forms appear at times to be changed, at times diminished. The patients feel hedge-hogs, leeches, toads, and snakes in the bed. One patient had the feeling that his blood-vessels were "bursting open" and that he would explode at any moment. Besides sensory deceptions, hyperaesthesias and hyperalgesias are frequently observed. Instead of the latter, in severe cases, pronounced hypalgesias and analgesias also occur.

Disturbances of the concept outflow, in the typical form, depend exclusively upon the content of the hallucinations. At times, the secondary inhibition predominates, especially in frightful, fascinating, and many imperative hallucinations. At times secondary flight of ideas predominates, as in very changeable, pleasing hallucinations. At times, finally, secondary incoherence predominates, as in massive accumulation of separate contradictory hallucinations.

In the latter case, there is frequently complete disorientation: the patient cannot give the month nor the year, believes that he has been in the institution a hundred years, and imagines himself to be at times in this, at times in that city. Often hallucinatory aprosexia is superimposed; less frequently, especially, when secondary flight of ideas predominates, hallucinatory hyperprosexia. In the description of the varieties of hallucinatory paranoia it is to be noted that sometimes, not only intercurrent (i. e., occasional and transitory) and secondary, but especially at times, also persistent and primary disturbances of the concept—outflow arise as dominating symptoms in the disease picture.

Sometimes the secondary deceptions of the patient are so fragmentary, flighty and numerous, that the formation of the delusional concepts from them is omitted. More frequently, the secondary deceptions lead to the formation of numerous delusional-concepts.

The patient believes that a conflagration threatens the house, that relatives are imprisoned, that poison is mixed in the food, that his marriage is being celebrated, that he had become president, that God had selected him for His instrument, etc. On the whole, persecutory ideas predominate over grandiose ideas. Very frequently there is a delusion of annihilation. The patient believes that all kinds of furious battles are going on, that everything is dead, that the world is coming to an end.

Countless mistakings of persons are added thereto. In consequence of illusions, strangers are taken for relatives. Objects are likewise mistaken; the house is taken for a castle, or for a dungeon; the ventilation openings for underground passageways out of which voices echo; stupefying odors escape; electrical discharges proceed. These secondary delusional-concepts springing from sensory deceptions, change according to the place of residence, the education and the life experience of the patient in the most manifold way.

Exceptionally concepts of having sinned also occur intercurrently: ("I have squandered all the world"); ("I have been a prostitute"). More frequently there are hypochondrical concepts. Thus a patient after his recovery related that on account of a remarkable sensation in the limbs, he had a concept that he must die "of tetanus." Another acute hallucinatory paranoiac said "all my internal parts are lost, etc." If the sensory deceptions give the patient sufficient time, he engrafts further delusional concepts upon the delusional ideas immediately springing from the sensory deceptions. This does not reach a logical systematization, for this, the changing of the sensory deceptions in acute hallucinatory paranoia is far too great. Therefore, the delusional concepts often stand in glaring contradiction to each other.

The patient believes he is a "dancing teacher," because he continually perceives electrical currents and at the same time, feels all kinds of hallucinatory movement-perceptions in his limbs, (here dances are induced by electricity); in the next moment, he perceives that he

is infected by the plague, ("voices have told me so"), and is to be locked in a tower, etc. Careful observation further teaches that besides these direct and indirect secondary delusional concepts springing from the sensory deceptions, also primary delusional concepts arise. Primary delusional explanations especially in which illusions and hallucinations in no way co-operate, are not rare. Thus, a patient referred to scars, the result of an injury long before his psychosis, and stated that he had been bitten by a dog. Any kind of an hallucinatory perception may be demonstrated. At the cry of a water fowl, a patient cried; "that is the Night of St. Bartholomew."

On occasion of an injection, an educated patient asked me excitedly "why should I be nailed fast?" Often these delusional explanations are exceedingly fantastic. Many patients also reach the conclusion, that a theatrical performance is taking place about them, that the fellow-patients are disguised personalities, for example, that attendants are disguised men, and collectively play a definite role. Between the forms of hallucinatory paranoia, first described, in which the massiveness of the hallucinations does not permit a delusional formation to take place, and the form last mentioned, in which an extensive delusional formation is engrafted upon the sensory deceptions, there exist the most graded transitions.

The emotional disturbances in the typical form, like the disturbances of the associations are collectively secondary. Their direction depends upon the content of the hallucinations, therefore, the severest fear emotions are found in connection with the most unrestrained exaltation, brutal anger emotions in connection with religious rapture. Even in one and the same patient the most variable emotions occur in succession corresponding to the changing content of the sensory deceptions. The most sudden emotional fluctuations may take place in the presence of the physician. In many cases it is unmistakable, that hallucinations show one and the same feeling-tone. For example, persistent exalted sensory deceptions or persistent fearful sensory deceptions govern.

In these cases, self-evidently, the secondary emotional disturbance is a unified one. For weeks and months, secondary exaltation or secondary fear, or religious rapture, etc., governs. Even in these cases, it may be supposed, that the uniform feeling-tone of the sensory deceptions indicates that besides the hallucinations, a primary emotional disturbance co-operates, and that the emotional alterations accordingly are not looked upon wholly as secondary phenomena of the hallucinations. This is wholly unquestionable in other cases, in which from the beginning of the disease, either occasionally or persistently, a morbid exaltation or depression arises; for the one sufficient explanation for the sensory deceptions sometimes happening cannot be ascertained, and for reasons they are not to be comprehended as primary.

The intercurrent appearance of primary fear-emotions especially is not very infrequent. The persistent appearance of primary exaltation or depression (sometimes governing the disease picture) is most frequent in the variety characterized by flightiness of ideas or in the stuporous variety of acute paranoia.

The primary exaltation is here connected with primary flight of ideas, the primary depression and fear with primary thought inhibition.

In very numerous and incoherent sensory deceptions, a well marked helplessness is at times also found. The disturbance of action which patients with hallucinatory paranoia present, is extremely variable. In the typical form, the disturbance of motility depends entirely upon the content of the hallucinations and delusional concepts. The agitating influence most frequently predominates.

Therefore, a continuous or remittent delirious excitation is found extremely frequently. Sometimes fear is the impelling motive, sometimes anger, sometimes exaltation. Correspondingly, sometimes, cries of anguish and attempts at flight predominate, sometimes assaults against the environment, sometimes singing and dancing. At times the disturbances are manifested as pantomimic and gesticulatory movement-deliria.

In this the rythmic tendency of emotions is not infrequently manifested, for example, in rhymes, couplet singing, etc. Often the motor agitation is also wholly traceable to the massiveness of the instreaming pathological percepts, without the emotions co-operating in any decided measure. Likewise, a well marked motor inhibition is very frequent. Indeed it is almost always of the catatonic form. Simple resolution is very infrequent. This inhibition is sometimes occasioned by hallucinations of the muscular sense, sometimes by terrifying or fascinating visions or threatening voices. If the sensory deceptions arise massively, and, at the same time, stand without any connection with each other, there is a high degree of secondary incoherence of movement and action of the patient. He wanders about aimlessly, and lays hold of things without purpose. Catatonic attitudes alternate irregularly with senseless agitation.

Often there are the wildest jactations, which give the unexperienced the direct impression of ataxia or chorea. Uncleanliness of various forms makes its appearance very early along with the incoherence. Besides these secondary disturbances of the motor associations, a primary acceleration, or inhibition, or incoherence of the motor associations also occurs intercurrently.

The individual actions and movements of the acute hallucinatory paranoiac show the most striking variations, corresponding to the manifold content of the sensory deceptions and delusional concepts lying at the basis. While the general demeanor of all maniacs (and likewise of all melancholiacs) is very similar, one paranoiac scarcely resembles another. Indeed the demeanor and actions of one and the same paranoiac may vary from day to day, while in spite of this, the attentive observer is able to separate certain types out of the multiplicity of the motor pictures, and is also often able to recognize many constant features in the motor picture, in all the changes of action and movement.

This is because, on the one hand, the just mentioned formal motor association disturbances give to the various

motor pictures a common stamp, and on the other hand, definite hallucinations always recur in individuals with similar educational training and similar social position; and sensory phenomena often show a definite constancy in the isolated individual, corresponding to the educational training, social position, and recent experiences in the course of the disease.

Sometimes, also, primary motor excitations occur which are entirely dependent on the sensory deceptions and delusional-concepts. Thus, a female patient stated very characteristically, "something in me makes me dance." "I don't know what it is that makes me dance, but I cannot resist." Another patient remarked, "I am compelled to sing, it is forced out of me from within." Other peculiar movements often recurring in a stereotyped manner in the same patient, depend upon very indefinite hallucinatory perceptions. Thus, a patient who during his psychosis had shown the most bizarre rotations of his body, reported after his recovery, "I was compelled to do it." "It passes through me like a cutting sensation through my entire body." "Afterward I wanted to adjust my body correctly." Another patient opened her mouth wide for hours because she felt as if her "blood was being extracted from her teeth."

The nutrition of the patient as a rule, suffers decidedly. Even without there being refusal of nourishment or severe delirium, the body weight decreases.

The vasomotor manifestations are very changeable. The pulse-picture generally shows an increased tension of the arterial wall (excitation emotions,) at times a spastic contracture of the peripheral arteries. The daily course of the body temperature shows very irregular fluctuations. In those cases which run a course with severe incoherence, disorientation, and agitation, there are often high temperatures. The picture of the condition which such patients present is also designated acute delirium.

Not infrequently there also exists excessive salivation, especially in juvenile individuals. The hydrochloric acid

secretion of the stomach is more frequently increased than diminished. Defecation and menstruation show irregularities. Reflexes, motility, and sensibility, in uncomplicated cases, are generally normal. The tendon phenomena are often markedly increased. Ankle-clonus, however, seldom occurs. Pressure points, wholly apart from complications with hysteria and neurasthenia, are frequently found, especially in juvenile individuals.

The field of vision is at times decidedly contracted. Analgesia, which accompanies the severest cases, has already been considered.

Acute hallucinatory paranoia often sets in with a prodromal stage. In this the patient's own person and his own environment become changed. Relations, full of secrecy, appear to exist. A feeling of uneasiness steals more and more over him. He associates every proceeding in the outer world in some manner with his person; he feels himself observed, and threatened on every hand.

"It appeared to me as if a form, invisibly and silently always went behind me." In this stage, already illusionary falsifications of the perceptions arise.

The fantasy of the patient plays him all kinds of tricks. He believes that he sees disguised persons, and dreams himself into all kinds of fantastic situations. Sleep therefore, becomes deficient. Often intense headaches and congestions occur. The dreams are sometimes increased in a quite striking manner and become morbidly active. Often the patient himself, states that he fears he is going insane. The prodromal stage sometimes extends over some months. Now and then it only lasts a few days. The principal stage of the disease develops exceedingly rapidly, generally engrafted upon these prodromal symptoms. Massive hallucinations and illusions, increasing avalanche like, make their appearance.

Not infrequently, they are, on the first and second day, already so numerous and over-powering, that the orientation of the patient is completely abolished.

Thus it happens that the patient often goes astray, takes aimless journeys, or goes tramping. Upon the basis

of hallucinations there now arises a catatonic condition of inhibition, or an outbreak of intense agitation. In the former case, the psychosis runs a course under the picture of a pseudo-stupor; in the latter, the excitation is often increased to a well marked delirium. A sharp demarcation does not exist. Not infrequently, the pseudo-stupor is interrupted by attacks of excitation, and the agitation by episodic states of pseudo-stupor.

The whole course lasts on an average about six months. Yet cases exist, in which the psychosis runs its course in a few days or hours, and gives throughout, the picture of a transitory insanity. On the other hand, the psychosis at times lasts over a year, and still finally passes into a complete recovery.

Very frequently, the course is a remittent one. Very often, two stages can be distinguished: in the first agitation predominates; in the second inhibition.

In very acute cases, the recovery may take place immediately. More frequently the sensory deceptions diminish in number within a few days or weeks.

The delusional concepts often disappear more slowly than the sensory deceptions. Many patients still declare after weeks, and even months, that they are surrounded by mysteries, that all occurrences of the environment have a relation to them, etc. Retrospective insight into the disease appears only slowly.

Exceptionally there are frequent severe relapses occurring in the course of convalescence. In those undergoing recovery, the memory of the experiences during the disease is throughout retained, but is still often somewhat deficient.

As to the prognosis of acute hallucinatory paranoia, it may be stated that these cases terminate either in recovery, recovery with defect, secondary dementia, chronic hallucinatory paranoia, or death. Recovery without defect occurs in nearly 70 per cent of all cases. At any rate it is here to be noted that relapses are extremely frequent in acute hallucinatory paranoia. Not infrequently it is observed that within one, two or three

years, after complete recovery, the psychosis recurs. Such a relapse may again recover, but finally, frequently in the third or fourth relapse, there follows, the termination in secondary dementia or chronic hallucinatory paranoia. About 30 per cent remain cured permanently (49 per cent over ten years). Recovery with defect is observed especially in individuals whose mental endowment was originally somewhat deficient, moreover also after a very protracted course of the illness.

Sometimes, moreover, such defect, at least partially, re-adjusts itself gradually by careful medical training. Secondary dementia is observed in 20 per cent of all cases. This unfavorable termination in the typical form, generally reveals itself in that the patients outside of their hallucinatory excitation also speak confusedly and answer in a silly manner. The actions and emotions of the patients do not stand in harmony with their sensory deceptions and delusional concepts. The body weight increases without physical improvement being noticeable. The careful observer discovers these traces of intellectual loss often very early. In juvenile individuals especially, termination in secondary dementia is to be feared. This termination in secondary dementia is also to be feared in those cases in which stereotyped motor excitations arise, i. e., not produced by sensory deceptions, delusional concepts, or emotions and not catatonic in character. Why these cases are particularly endangered, only about 30 per cent completely recovering, has not yet been determined.

On the other hand, these primary motor stereotypies not infrequently take place in the acute hallucinatory paranoia of the weak minded without the prognosis being essentially made more favorable. The transition into chronic hallucinatory paranoia takes place either in the above mentioned manner, by the continuous appearance of relapses, following at shorter intervals, or also directly engrafted upon an acute individual hallucinatory attack.

In the latter case, it happens that even where the hallucinations subside, the patient remains wholly under the influence of the delusional concepts springing from the hallucinations.

The immediate and intense action of the hallucinations upon the emotions becomes lost. The delusional formation predominates over the hallucinatory processes. Amongst the hallucinations themselves, the auditory deceptions, in the transition to a chronic course, often gain predominance over the visual deceptions in quite a striking manner. Fatal termination in cases running a course under the picture of acute delirium, is very frequent. Inter-current diseases (pneumonia, intestinal catarrh, phlegmon, endocarditis, exhaustion) are among the important causes of death. Fat emboli in the pulmonary arteries (for example, after bony fracture during excitation) may likewise bring about a fatal termination. Suicide also at times occurs.

The most important varieties of acute hallucinatory paranoia are brought about by the engrafting of primary association-disturbances or primary emotional disturbances upon the cardinal symptoms of the psychosis, namely, sensory-deceptions and delusional-concepts. These primary association disturbances are flight of ideas, thought inhibition and incoherence (agitation, motor inhibition, and motor incoherence). The primary emotional disturbances are exaltation and depression. On the former, anger-emotions, on the latter, fear-emotions are frequently engrafted. The characteristic of these varieties does not lie in the fact, that in general, flight of ideas, thought inhibition, incoherence, exaltation, or depression arises in an acute hallucinatory paranoia, but in the fact that those disturbances arise primarily, i. e., independently of hallucinatory and delusional concepts. It has been expressly emphasized above, that secondary association and emotional disturbances arise exceptionally frequently, and in a certain measure evidently correspond to, the content of the hallucinations and delusional concepts in question.

That in a patient whom a voice threatens with death, the thoughts stand still and extreme fear arises, is comprehensible from the hallucinations alone.

Thought inhibition and fear are here not to be regarded as a new disease symptom, but as entirely secondary. Such cases throughout remain in the realm of typical hallucinatory paranoia. However, it has already been mentioned above, that now and then primary association disturbances and primary emotional disturbances also arise intercurrently. The patient, e. g., has a fear attack of some hours' duration, without any form of sensory deception or delusional concept that can be made responsible for it. This intercurrent arising of primary association and emotional disturbances is still not important enough to establish particular varieties of acute hallucinatory paranoia upon the basis of the same. Now, however, the same primary disturbances and emotional disturbances occur not only intercurrently, but also not infrequently permanently in the disease-picture accompanying the hallucinations and delusional concepts.

In this way arise some important varieties of acute hallucinatory paranoia. They are:

1. The flightiness of idea form; with persistent flight of ideas (association-acceleration).
2. The stuporous form: with persistent primary thought inhibition (association retardation).
3. The incoherent form: with persistent primary incoherence (dissociation).
4. The exalted form: with persistent primary exalted mood.
5. The depressive form: with persistent primary depressed mood or fear.

Since persistent exaltation almost never occurs without persistent association acceleration, and persistent primary depression almost never without persistent association retardation, therefore the variety "4" essentially comes under variety "1" and variety "5", under variety

"2". Therefore, primary persistent exaltation and depression will be directly included in the description of varieties "1" and "2".

1. The cardinal symptoms, according to the above, are hallucinations, delusional concepts, and primary flight of ideas, besides corresponding agitation.

Often, but not always, a well marked primary exaltation is added thereto.

The content of the hallucinations on the whole, corresponds to the exalted emotional state. Among the delusional concepts, grandiose ideas therefore predominate. At times, in a high degree of increase of the association acceleration, there arises a secondary, so called flightiness of idea incoherence.

Often verbigeration and rhymes occur. Apparently this flightiness of idea variety of acute hallucinatory paranoia, represents a transition from the latter to mania. If it is imagined that the hallucinations subside more and more, and the primary flight of ideas and exaltation alone govern more and more the disease-picture, then the transition into mania is given. As a matter of fact, between the hallucinatory variety of mania and the flightiness of idea variety of paranoia, quite graded cases are observed.

The cardinal symptoms of the stuporous variety, are hallucinations besides secondary delusional-concepts, and primary thought-inhibition besides corresponding motor inhibition. At times, but not always, well-marked primary depression is added thereto (with or without fear.) The content of the hallucinations in the latter case correspond on the whole, to the depressed type; amongst the delusional-concepts, ideas of persecution, of impoverishment, and of having sinned predominate. The motor inhibition is generally a catatonic one.

Often it is suddenly interrupted by a jumping of the patient, to whom, for example, a voice addresses a command. Often mutism occurs for days. Only slowly, with frequent pauses, the patient carries a spoon to the

mouth, or often abstains from eating. To questions he answers not at all, or extremely slowly.

Quite simple questions are often calculated. Difficulty in recollection and aprosexia are never wanting. At times this stuporous variety represents a transition form of acute hallucinatory paranoia into melancholia, at times into stupidity, according as to whether the inhibition affecting mostly the association and depression, predominates, or that affecting mostly the memory-pictures and apathy. As a matter of fact, cases are often observed, which represent graded transition-forms between the hallucinatory variety of melancholia, and the stuporous variety of acute hallucinatory paranoia, and others which represent graded transition forms between the hallucinatory variety or stupidity and the stuporous variety of acute paranoia. Very frequently, the flightiness of ideas form combines with the stuporous form in a so-called cycle.

At times, the condition rests with such a cycle, at times it repeats itself regularly at definite intervals. This form of circular insanity is also briefly designated as "circular paranoia." Not infrequently circular paranoia is observed at puberty. In the flightiness of idea form, elated and stuporous depressive phases are always irregularly manifested. Intervals are generally entirely wanting. The prognosis, in contrast to the peculiar regular circular paranoia is entirely favorable. One must be aware of the possibility of the mistaking the disease for a hebephrenic dementia running a circular course.

The prognosis of the flightiness of ideas form and of the stuporous variety is, on the whole, more favorable than that of typical acute hallucinatory paranoia. In the flightiness of ideas form, especially, the termination in secondary dementia is rare. The cardinal symptoms in the incoherent variety, or amentia are hallucinations, secondary delusional concepts, and primary incoherence of the concepts out-flow, besides corresponding motor incoherence.

A pronounced disorientation always exists. The motor incoherence often leads to paramimia and pseudo-

paraphasia. The emotional excitation shows quite irregular fluctuation. At times exaltation on the whole predominates, at times, depression. Flight of ideas, or thought inhibition may also be superadded as a complicating symptom. On the whole, motor agitation is more frequently superadded than motor inhibition, to the incoherence, and the motor agitation is frequently carried to the extent of senseless and helpless jactation which were formerly described as chorea magna. In these cases of severest incoherence with agitation, fever also frequently arises and thus appears the dangerous symptom-triad of acute delirium.

Not infrequently the primary incoherence appears in the foreground, while the sensory deceptions and delusional concepts subside more and more, and indeed are entirely omitted for days and weeks during the course of the disease. The course of the incoherent form has many peculiarities. Often for months, an eccentric exalted conduct preceeds the outbreak of the disease. That peculiar feeling of doubt and secrecy with which the typical form sets in, is rarely in evidence. The main stage as a rule sets in very suddenly, with rapidly increasing incoherence. Fear is generally definitely denied. Frequently complaint is made of "heat and unrest in the head." A secretive, paramimic expression of laughter appears which is puzzling to the patient himself. The next day the patient talks a great deal, but he often loses the thread of the conversation.

Hallucinations and illusions are often completely wanting. Hereditary taint is demonstrable in about one-half of the cases. Probably rachitic hydrocephalus also occasions a predisposition. In female individuals, acute hallucinatory paranoia is more frequent than in males. The forms of acute hallucinatory paranoia may occur at any age, at the age of puberty, as well as the climacterium, and at senility it appears to occur exceptionally frequently and without any especial exciting causes. At middle life a more definite, special exciting cause for the outbreak can almost always be shown.

The chief causes of acute hallucinatory paranoia are exhaustion, acute or chronic intoxication, and acute infection. The factor of exhaustion appears the most manifest in the cases where the disease develops from physical fatigue, insufficient nourishment, and deficient sleep, after severe intellectual over-exertion, upon the basis of severe anaemia, especially after hemorrhages, after frequently repeated child-births, or difficult labor. The intoxication cases, include those especially of alcohol, lead, and cocaine poisoning. Infection following child-birth plays one of the main roles as an etiologic factor. Not infrequently it is shown anamnesticly that to these essential etiological factors, an exciting cause is also finally superadded, and has contributed immediately to the outbreak of the disease. Thus not infrequently in an exhausted puerperal case, an emotional shock, e. g., fright because of a convulsion in or death of a child, etc., some weeks after child-birth, has induced the outbreak of the disease. The same has often been observed in the acute hallucinatory paranoia of puberty and of the climacterium.

Trauma furnishes a further etiological factor. Acute hallucinatory paranoia may be engrafted immediately upon a trauma, or may first break out after an interval of some hours and even some days. The psychogenic neuroses, especially hysteria, also show a decided predisposition to acute hallucinatory paranoia.

The acute hallucinatory paranoia of puberty is characterized by its tendency to intercurrent flight of ideas. Stereotyped attitudes and movements also are not infrequent without decided clouding of consciousness. The climacteric form is often introduced by depression lasting for weeks. The outbreak and recovery take place very suddenly, but it is frequently observed that after the disappearance of the hallucinations, the patients pass through a short stage of delusion in reference to their surroundings.

The senile form in the prodromal stage often manifests headache, pressure of the head, dizziness, sleepless-

ness, gastro-intestinal disturbances, and irritable lachrymose mood. The outbreak takes place very suddenly. Exceptionally one observes in senility an attack of loss of consciousness before the beginning of the psychosis. In the course of the psychosis, the intensity of the disorientation generally becomes apparent. Thus a patient believed that he held the whole world in his outstretched hand, and that if he should let go, the whole world would be destroyed. Sensory deceptions and delusional concepts of fearful content predominate. The actions often bear a clearly, impulsive character.

Slightly fleeting pareses easily contribute to make an unfavorable prognosis, upon the basis of the wrong diagnosis of a senile dement. The exhaustion and infection-forms correspond to the picture forming the basis of the main description. Very often, however, primary incoherence sets in very early so that the disease-picture of amentia of the dissociative form arises. The puerperal form, which may exceptionally recur after every confinement shows variable pictures, according as to whether exhaustion or infection, etc., plays the important role. The average duration is from six to ten months. The percentage of recoveries may be as high as 70%. The most frequent prodromal manifestations are motor unrest, sleeplessness, frightful dreams, ringing in the ears, seeing objects before the eyes, headache, lassitude, irritability, and apprehension. At times also a peculiar aversion for the child appears.

The same sentence and same action is often aimlessly repeated. Even before the outbreak of the hallucinations, the incoherence may announce itself by aimless actions. The course is often a remittent one. Recovery generally takes place slowly. In the toxic forms, the massiveness of the sensory deceptions is particularly striking. The alcoholic is particularly important.

The disease picture corresponds mostly to the picture for the basis of the main description. Incoherence is less frequent and when it arises, is generally secondary.

Primary fear emotions are frequent. In the traumatic form, feelings of dizziness and vestibular hallucinations appear to play a particular role.

The hysterical forms generally show a strong predominance of visual and organic hallucinations. Delusional explanations of the latter play an essential role. Beside genuine sensory deceptions, numerous phantasies also occur.

The feeling-tones and especially the expressions of the feeling-tones are strikingly active. The disturbance of orientation is much more superficial than it appears from the expression of the patient. Often a moderate consciousness of illness is present, at least intercurrently. The polyneuritic form is characterized above all by an enormous disturbance of the capability of attentiveness and therefore also orientation. As a rule, hallucinations predominate at the beginning of the disease, and occasions intense agitation or stupor, while in the further course, disturbances in the capability of attention appear in the foreground.

Very frequently, there are also fantastic confabulations. Physical symptoms are never absent. Most frequently there are neuritic paralyses in the crural and the perineal regions. Very frequently also the nerves of the upper extremities are involved, particularly in the distal branches. The sensibility disturbances, because of the physical state, are deprived of an exact determination. At times, ataxia predominates instead of pareses, so that tabes may be simulated (peripheral neuro-tabes). Occasionally the cranial nerves are also involved. Complete recovery is rare. Generally only recovery with defect is attained.

Frequently the further course is subacute. Not infrequently, death takes place in the deliriant phase. Secondary dementia may also often develop. By complication with hemorrhage and hemorrhagic softenings, manifold clinical complications may also arise. Like all the special forms described, the poly-neuritic form is also in no way specific. A similar course with a similar

picture occurs also in alcoholics with polyneuritis, after acute infectious diseases, in other intoxications, in brain syphilis, in the course of paresis, etc.

HEAVENLY BRIDEGROOMS

BY THEODORE SCHROEDER
AND IDA C.

The Sons of God saw the daughters of men that they
were fair; and they took them wives of all that
they chose.

Genesis 6:2.

EXPLANATORY NOTE.—In the course of my studies on the erotogenesis of religion I became interested in the life work and mental characteristics of one Ida C., a woman who committed suicide in her forty-fifth year. I first heard of her after her death, but it seemed to me that a psychologic study of her would yield rich materials as a contribution to the psychology of religion. Consequently, I bestirred myself to secure information, both biographical and auto-biographical. Among the materials gathered was her life long correspondence with friends, a number of published essays written by her, some scraps of manuscripts, and two completed but unpublished book manuscripts. This material will later constitute the subject of my analysis. Ida C—— was for a number of years a college teacher and for a long time associated with various kinds of free-thinking heretics. She was never married. In due time she became the victim of erotic hallucinations to which she gave a "spiritual" interpretation. Later, when her conduct brought her to the verge of incarceration in a jail or in an asylum, she endeavored frankly to meet the issue of her own insanity. The resultant investigation to her mind seemed a complete vindication, not only of her sanity, but also, of the objective reality and spirituality of her erotic experiences. This vindication she reduced to writing. The manuscript is now in my possession. It seems to me under the circumstances of this case and the future studies which I am going to make, partly from other papers of the same author, that this is too valuable a document to be mutilated by editing. Furthermore, others should be given equal opportunity with myself in the interpretation of this material. The manuscript had been revised by its author and in a number of places it was quite impossible to decipher the pen-interlineations, or replace words destroyed by the tearing of the manuscript through frequent handling before it came into my possession. At such places a word may be occasionally omitted or a connection

left defective, otherwise the following document is in the exact words of its author. This essay, I believe, was written before her thirty-fifth year, that is ten years before her suicide, and twenty-two years before the present publication. Her subsequent development will be brought out in my own study of her. Just before she wrote this she was a short time a voluntary inmate of an asylum and pronounced incurably insane. She left the country to escape legal commitment.

THEODORE SCHROEDER.

PREFACE.

IT has been my high privilege to have some practical experience as the earthly wife of an angel from the unseen world. In the interests of psychical research, I have tried to explore this pathway of communication with the spiritual universe, and, so far as lay in my power, to make a sort of rough guide-book of the route. For not all wives of heavenly bridegrooms travel the same path at first. There are roads running into this one from every religion and folklore under the sun, since the pathway of marital relations on the Borderland was once, and still is, as I hope to show, one of the main thoroughfares connecting our world with the world beyond the grave. This thoroughfare, along part of which I hope to conduct the reader in imagination, is marked with signposts, many crumbling under the religious storms of centuries, others preserved as sacred trellises upon which to train a rank growth of flourishing superstition, and still others fresh with modern paint and gilding. Part of this thoroughfare runs straight through the Christian Church, or, to speak more accurately, the foundations of the Church are laid upon this very principle. For Jesus himself is said to be the child of a union between an earthly woman and a heavenly bridegroom who (however godlike, and whatever the details of the relation) certainly seems to have manifested to Mary on the occult plane. If it be objected that Mary's Borderland spouse was not an angel, but God himself, and therefore Borderland laws could be laid aside in His case, I reply that modern philosophy holds apparent miracles to be no violation of natural laws, but to have

happened in accordance with some law as yet unknown to us, for God never breaks His laws, and if He became a Borderland spouse to Mary, it must have been in accordance with Borderland laws. And we, as made in His likeness, are bound by the same natural laws as God. Moreover, as Mary and me are sharers in a common humanity, she and me are bound alike, sharers in the glorious possibilities of Borderland.

The abraded survivals of an ancient religious teaching of marital purity and self-control of so lofty a type that it has been obscured by the fogs in the lowlands of modern sensuality. Enlightened by my experiences as the wife of my unseen angel visitant, I wrote a defence (from a folklore standpoint) of the *Danse du Ventre*, which was published in the *New York World*. This I afterwards added to, and issued in a typewritten essay for private circulation. As the essay showed that I wrote from experience; as I was still "Miss" C.—, and as my social standing had hitherto been above suspicion; I deemed it only prudent to state to my readers that I had acquired my knowledge from a spirit husband. This I did on a little slip of paper pinned to the last page of the essay. The persecutions which in consequence of this straightforward effort to tell the truth simply and clearly—I suffered at the hands of those who deny the possibility of angelic communication, need not be dwelt on here. Suffice it to say that, while my non-occultist readers who did not know me personally, pooh-poohed the idea of a spirit husband, declared that I must surely speak from an illicit experience, my non-occultist friends, who knew my habits of life from day to day, could find no explanation for the essay but that I must have gone crazy; and two physicians made efforts to have me incarcerated as insane. One of the latter remarked, "Had that essay been written by a man, by a physician or by any other scientist (and the paragraph about the spirit husband omitted) it would have been alright; but coming from an unmarried woman, neither a physician or a scientist, and with that claim of a spirit husband,

there is no explanation possible but (1) illicit experience, which is denied by all who know her, or (2) insanity." That is to say, because I had, by means of knowledge gained through channels of which he was ignorant, given utterance to what would have passed unquestioned if coming from a scientist, therefore, I must be insane. To put it more tersely, a diamond of truth is to be considered genuine only when discovered by A or B; if the same diamond be discovered by X, Y, or Z, it is to be considered paste. My worst offense, however, in his eyes, seemed to be that, as a woman, I was out of my province in openly preaching marital reform, however high the ideals advocated; and, as my sense of duty did not conform with his conventional prejudices, he felt justified in seeking to incarcerate me until I should recant my heresy.

The factors in this case were:

1st. An unmarried woman of known reputation and integrity.

2nd. An essay written by that woman, dealing with the marital relation along lines not known to one married couple in a thousand.

3rd. A claim by the essayist, that she wrote from an experience gained as the wedded partner of a ghost.

To ignore any one of these factors in arriving at a theory to explain the other two, is to invalidate that theory.

Now, there is one creed to which all genuine Free-thinkers are faithful. It is to seek the truth, wherever it leads, and whatever the traditional belief upon the subject under investigation. This being so, I feel that I may confidently appeal to Freethinkers to consider carefully the evidence herewith submitted as to marital relations on the Borderland.

Last, but not least, I appeal to Spiritualists, Theosophists and Occultists generally. Psychics and sex, Laurence Oliphant has shown, are so interwoven that you cannot take up one wholly separate from the other. Only an occultist—and somewhat experienced occultist,

at that—knows anything of the perils which await the developing psychic on the Borderland. The Middle Ages are strewn with wrecked lives—mainly those of illiterate women, who, beginning by dabbling with magic in an empirical fashion, ended by confessing themselves as witches, devil-haunted in body as well as in mind, and pledged to sins against nature. Within the sheltered precincts of the most conservative of all Christian churches—the Roman Catholic—“*Congressus cum daemonis.*” And among the non-churchly practisers of modern occultism we too often find a tendency, on the one hand, not only to justifiable freedom, but also to unjustifiable looseness of life; or on the other hand, to a rigid asceticism and unnatural suppression of the sex instinct as impure. All these things point to the necessity for some teaching as to the fundamental principles of sex morality on the Borderland—all the more, as spirit bridegrooms and spirit brides are much more frequent than is generally supposed. Between the witch who held diabolic assignations as a devil's mistress, and the psychic who has been trained to self-control and reverent wedlock with an angel, it must surely be admitted, there is a wide stretch of road. Nevertheless, both are on the same road, and the downward grade is very slippery. In so far as I have been able to explore this road, therefore I think it my duty to map out its perils and its safeguards, as help to my fellow occultists. For, no matter on what obscure by-path a psychic starts, he or she can never be sure of not coming upon this road unexpectedly, since it is, as I have said, one of the main thoroughfares of occultism.

To all three classes, then—to Occultists, Freethinkers and Christians—I respectfully offer this treatise for consideration in the hope that each may find in it something of interest, and, mayhap, of profit.

HEAVENLY BRIDEGROOM.

The celestial being, who, whether as God or angel, becomes the Heavenly Bridegroom of an earthly woman, is better known to the literature of the Christian Church than most people who are not theologians are aware. But he is not peculiar to Christianity. He has been known and recognized throughout the world in all ages. The woman to whom he comes, is as a rule, distinguished for her purity of life. Usually she is a virgin; but where already married and a mother, she must be recognized as chaste, or, at least, there must be no stigma of impurity upon her reputation. I am not at the present writing aware of a single exception to this.

Let us, however, first consider the Heavenly Bridegrooms of Christianity, from the popular orthodox standpoint.

There are two Heavenly Bridegrooms—the Holy Spirit and Christ. The first of these, the Holy Spirit, is, according to the New Testament, the Being through whose agency she whom the Catholic Church delights to honor as the Blessed Virgin became incarnate with Jesus. The second of these, Christ, is the Being honored alike by Catholics and by Protestants as the Bridegroom of the Church; by Catholics also as the mystic Spouse of the ecstatic and purified nun, as in the case of Saint Teresa; and by Protestants as the Bridegroom of the Soul, in that popular hymn beginning:

“Jesus, Lover of my soul,
Let me to Thy bosom fly!”

I once attended a young women's revival meeting at Ocean Grove, held under the auspices of an evangelist who was noted for his success in converting young girls. When the enthusiasm flagged, and his hearers were slow in responding to his appeals to “come to Christ” he started the above hymn, and the ardor of his fair congregation was at once kindled, girl after girl rising to publicly give herself to Christ. That which earnest pleading for their soul's salvation had failed to accomplish, was brought

about by this simple suggestion of the "Lover of the Soul." In thus stimulating the untrained emotions of the maiden to aspire to the Divine through the symbolism of earthly affection, this revivalist not only showed keen insight into human nature, but he was also instinctively true to the teachings of the innermost truth of all religion, as I hope to show further on.

In the Bible an entire book—the Song of Solomon—is given up to expressing the raptures of the Heavenly Bridegroom and his Bride. At least, this is the interpretation which the Christian Church universally puts upon Canticles—the reciprocal joys of Christ, the Bridegroom, and His Bride, the Church. Various phases of the sensuous relations of husband and wife are there set forth, in figurative but unmistakable terms of passion—passion which the Christian world has, unfortunately, long since forgotten how to utilize as the most important means of growth toward the Divine.

But there are other Heavenly Bridegrooms besides Christ and the Holy Spirit referred to in the Bible. In the sixth chapter of Genesis may be found a curious text, which reads:

"The sons of God saw the daughters of men, that they were fair; and they took them wives of all that they chose."

"The Septuagint originally rendered the words 'Sons of God' by a (angels of God) and this rendering is found in Philo, de Gigantibus, Eusebius, Augustine and Ambrose. This view of Genesis VI. 1-4 was held by most of the early fathers."

(See the Book of Enoch, translated from Professor Dillman's Ethiopic Text, by R. H. Charles. Oxford, 1895.) In fact, in the Book of Enoch, these sons of God are spoken of all through as angels who wedded earthly women; and it is further stated that these angelic husbands broke the law, living in depravity with their earthly wives, and laying the foundation of evils which required the Deluge to sweep away. Critical scholarship usually holds these angels to be fallen. But St. Augustine protests

against this very saying: "If I truly believe that God's angels could never fall so at that time."

Nevertheless we find in the Book of Enoch, XV: 4, the following:

"Whilst you were still spiritual, holy, in the enjoyment of eternal life, you have defiled yourselves with women, have begotten (children) with the blood of flesh, and have lusted after the blood of men, and produced flesh and blood, as those produce who are mortal and short-lived."

Here we see that the angels, whatever their after depravity, were "still holy" when they united themselves as heavenly bridegrooms with earthly women.

However, from the above, and from other texts in Enoch, it would appear that the angels are blamed for having broken the laws of right living so far as to turn the relations existing between them and their earthly wives into the grossest sensuality. They, rather than the women, seem to be credited with the responsibility for evil-doing. But it is noticeable that Genesis is silent as to the character of these angelic bridegrooms, while it lays stress on the fact that the imaginations of men's hearts were evil continually, as though this last were the real cause of the wickedness which required the purification of the Deluge.

Now, let us remember that the Book of Enoch, although referred to in Jude, is not canonical. It belongs to the Hebrew Apocalyptic literature, and was for some time lost, save for a few fragments preserved in reference made by ecclesiastical writers. However valuable to scholars, it is uncanonical and thus cannot be accepted by Christians as the Word of God. Genesis, on the contrary, is accepted by Christians today as the Word of God; and therefore, the total omission of this sacred book to bring any charge against these angelic "sons of God," while the depravity of *man* is dwelt upon at this period of the world's history, is not a matter to be passed over lightly by a Christian.

According to the Christian Scripture, then, it was not the wickedness of the angels who wedded earthly women, but the evil imaginations of the human heart that brought about the punishment of the Deluge. And in this, Genesis is in strict accord with modern theosophy—the only philosophy, so far as I know, which professes to know the Alpha and Omega of occultism. Theosophy lays stress on the punishment which awaits the black sorcerer—the earthly being who uses magical powers for selfish or impure purposes. But Theosophy is not alone in this teaching. All occultism, by whatever name it is called, however imperfect in deductions, learns at least to beware of the occultist who breaks the moral law, or who, whether wilfully or carelessly, through prejudice or through crafty desire to advance his own selfish interests, closes his eyes to the truth. In other words, clear thinking and correct living are the only passport to trustworthiness in an occultist.

I have said that *all* occultism learns this lesson at last.

It is true that there are many psychical phenomena which at first sight do not seem to require any special exercise of morality on the part of the percipient. Such are the carefully attested phenomena of thought transference and wraith-seeing (especially of the astral form as “double” of people at the point of death or undergoing a sudden shock) which the Society for Psychical Research have collated from a multitude of sources, in the case of the double to the number of some three thousand. The percipients in these instances are probably average sort of folks, no better and no worse than their fellows. Yet they see or they hear by means of senses which are still unrecognized by most people, and which are therefore, termed occult; and what they perceived is afterwards proved to be an actual occurrence, often of something taking place miles away. But it is to be observed that the reliable cases collated by the Psychical Research Society are furnished by people who seem to be clear-headed enough, at least, to form definite mental concep-

tions. That the majority of these cases are perceptions of occurrences in this earthly life. Where the thing claimed as seen or heard by the percipients no longer belongs to this world, but to the world beyond the grave, as in the case of visions or voices of those now deceased, the phenomena, collated by the Society of Psychical Research seem not only to be but they also seldom furnish a veridical capricious (i. e., truth telling) communication.

In the case of Spiritualist mediums, professional or amateur, where the phenomena assume some show of regularity, and are claimed by the medium to come entirely from the world beyond the grave, or through its aid, one always has to be on one's guard against the subtle interpolation among otherwise truthful matter of fantastic or misleading statements made apparently by the communicating spirits themselves. Occultists in all ages have invariably assumed such statements to be the work of "lying spirits." But it is noticeable that the medium of correct life and clearness of intellectual conception is less troubled by such lying spirits than is the medium of halting intellect or morals. This of itself should indicate to the thoughtful student of occult phenomena that the medium, and not the spirits may be to blame when lying communications are made.

It is generally assumed that the false or fantastic remarks so subtly interpolated into communications which are otherwise truthful and uplifting are due to evil spirits getting temporary control of the medium. But this theory presupposes a state of society in the spirit-world far worse regulated than with us. It is often claimed, for instance, that throngs of spirits crowd about a powerful medium as a crowd of people on earth sometimes flock about a telegraph operator in times of excitement, each man selfishly striving to get his message sent off first. But, even in our imperfect civic life, is such an occurrence usual? By no means. Is it likely that in a new life with its added experience, such gross violations of law and order should be allowed to continue right

along? *By no means.* Even if Heaven be not as Christians believe, the abode of God and the angels. Even supposing that it is merely, as most Spiritualists claim, an improved edition of this world; it is but logical to infer that law and order will obtain there as here; and even more so, because the tendency of human society is always in the direction of systematizing its work for mutual convenience of its members. The idea of a good spirit may at any moment be temporarily displaced by an evil one, and that the laws of that clearer thought-world beyond the grave are powerless to cope with this annoyance is absurd, and contrary to common sense. The fault of imperfect communication is just as likely to be ours as others. Let us see to it that the lines of telegraphic communication are laid in correctness of moral living, and clearness of intellectual conception, (on our side of the abyss of death) before we rashly assume the fault to be theirs. In other words, if they are in a world where new laws of matter obtain, as they must be, if they live at all after the death of the body—to communicate intelligently with us may not be so easy for them as we imagine. They may find themselves confronted at every turn by such difficulties. Therein will be found also a statement requiring an occult principle which seems not only to forbid spirits from communicating accurately with an immoral medium, but which seems to positively enjoin upon them the utterance of all the foolish, depraved and even criminal ideas that the medium is willing to receive, and places us mentally at a standpoint where all else is out of focus. Thus the slightest prejudices on any given subject under discussion between our celestial visitors and ourselves will render us liable to distorted conceptions of their ideas. Such is the law of our own thought-world here on the earthly plane; and we must remember that they have left our plane and entered into a far wider thought-world than ours. Hence the need for rigidly clear thinking on the part of every would be occultist. And, since, as has been well said: "All badness is madness," we must not forget to also

reckon a well ordered moral life as among the attributes of the really clear-headed man or woman. This correct living and clear thinking go hand in hand as vouchers for accuracy of mediumship between this world and the world beyond the grave. The philosophy which deals with the subjective consciousness, as an important factor in fantastic and misleading psychic phenomena from spirits, will be found set forth at length. Sufficient to say here that in all such cases, however varied the manifestations, whether of an abnormal sub-consciousness or of outside intelligences, failure to think clearly as to live in accordance with the moral requirements of self-control, duty, aspiration to the highest, unselfishness and genuine purity, will be found responsible for the disappointing psychic manifestations on the Borderland.

When, therefore, the Book of Enoch blames the angelic sons of God, rather than their earthly wives for the depravity of relations said to exist between them as spirits and mediums, we may well ask if this be not a matter on which the writer of the Book of Enoch has carelessly accepted current legends. May it not be that he, too, believed all depraved psychical manifestations to be due to "evil spirits" and that he was totally unaware of the occult law which brings these things to pass with a medium who, ignorantly but persistently, fails in clear thinking or correct living on the Borderland?

Once more let us note that the Book of Genesis, which is Canonical, lays stress on the fact that at this epoch the imaginations of men's hearts were evil continually.

When the Christian Church appeared on the stage of history, it found several varying traditions current about those sons of God who, so many centuries before, had taken unto themselves wives from among the daughters of men.

One after the other the early Church Fathers wrestled with these traditions, and strove to fit them into the Christian theological system. Beginning with Paul, we find that he asserts in the 1st Chapter of 1st Corinthians,

that a woman ought to be veiled, as a token of her inferiority and dependence upon man, and he adds: "For this cause ought the woman to have a sign of authority on her head because of the angels?" Irenaeus, in his work *Against Heresies*, quoting this text makes it read, "A woman ought to have a *veil* upon her head because of the angels." From Tertullian we learn what this means. He says in his work *Against Marcion* (V. 18.):

"The apostle was quite aware that spiritual wickedness (Ephesians, VI, 12.) had been at work in heavenly places when angels were entrapped into sin by the daughters of men."

In sundry places Tertullian waxes wroth over this supposed "entrapping" of angels by earthly women. In a treatise *On the Veiling of Virgins*—written for the purpose of compelling all unmarried women to be veiled as were the married, one reason being that they were "Brides of Christ"—he speaks his mind thus:

"So perilous a face, then, ought to be shaded, which has cast stumbling-stones even so far as heaven; that when standing in the presence of God, at whose bar it stands accused of the driving of the angels from their (native) confines, it may blush before the other angels as well; and may repress that former evil liberty of its head—(a liberty) now to be exhibited not even before human eyes."

On Veiling of Virgins, VII.

The author of the Testaments of the Twelve Patriarchs is, if anything, more severe. He remarks:

"Hurtful are women, my children; because, since they have no power or strength over the man, they act subtilly through outward guise now they may draw him to themselves; and whom they overcome by strength, him they overcome by craft * * * * *. By means of their adornment, they deceive first their minds, and instil the poison by the glance of their eye, and then they take captive by their doings, for a woman cannot overcome a man by force * * * * *. my children * * * * * command your wives and your daughters

that they adorn not their heads and their faces; because every woman who acteth deceitfully in these things hath been reserved to everlasting punishment. For thus they allured the Watchers before the flood."

Testament of Reuben, 5.

He adds that these angelic Watchers manifested as apparitions to the women at the times of their union with their earthly husbands; "and the women, having in their minds desire towards their apparitions, gave birth to giants, for the Watchers appeared to them as reaching even unto heaven."

Here we see an attempt to account for the resulting progeny of "giants" by such simple and natural means as Jacob made use of when he desired to produce "ring-straked, speckled and spotted" goats (Genesis XXX). No mention is made of marital relations being established directly between earthly women and angels. Elsewhere the same writer (Testament of Naphthali, 3) he speaks of these same Watchers as having "changed the order of their nature, whom also the Lord cursed at the flood, and for their sakes made desolate the earth."

This follows a reference to Sodom, the writer seeming to trace a similarity between the two causes of the two punishments. Justin Martyr, however, makes the offence of the sinning angels to consist rather in ambition for power over mankind. He says:

"God * * * * committed the care of men and of all things under heaven to angels whom He appointed over them. But the angels transgressed this appointment, and were captivated by love of women, and begat children who are those that are called demons; and besides, they afterwards subdued the human race to themselves, partly by magical writings, and partly by fears and the punishments they occasioned and partly by teaching them to offer sacrifices, and incense, and libations, of which things they stood in need after they were enslaved by their lustful passions; and among man they sowed murders, wars, adulteries, intemperate deeds, and all wickedness."

These things, according to Justin, the poets (unaware that they were due to sinning angels) ignorantly ascribed to God (Jupiter), and to those who were called his brothers, Neptune and Pluto, and to the Olympian deities in general.

Lactantius lays the blame principally upon Satan. Speaking of the repeated efforts of the serpent ("who from his deeds received the name of devil, that is, accuser or informer") to corrupt mankind, he adds:

"But when God saw this, He sent His angels to instruct the race of men, and to protect them from all evil. He gave these a command to abstain from earthly things, lest, being polluted by any wily accuser, while they tarried among men, allured these also to pleasures, so that they might defile themselves with women. Then, being condemned by the sentence of God, and cast forth on account of their sins, they lost both the name and the substance of angels. Thus, having become ministers of the devil, that they might have a solace of their ruin they betook themselves to the ruining of men, for whose protecting they had come."

Lactantius Epitome of the Divine Institutes. Chap. XXVII.

Thus from angels the devil makes them to become his Satellites and attendants. But they who were born from these, because they were neither angels nor men, but bearing a kind of mixed (middle) nature, were not admitted into hell as their fathers were not into heaven. Thus there came to be two kinds of demons, one of heaven, the other of the earth.

Lactantius, The Divine Institutes, Book II, 15.

(TO BE CONTINUED.)

DEMENTIA PRECOX STUDIES.

ADRENALIN: A NEW DIAGNOSTIC TEST FOR DEMENTIA PRECOX.

BY BAYARD HOLMES, M. D.,

Chicago.

ANYTHING that will assist in an early diagnosis of dementia precox is a welcome scientific fact, and will receive wide appreciation, for the frequency of this disease seems to be increasing in the records of admissions to our state institutions. The absolutely unfavorable prognosis that this diagnosis carries with it leads the early consultants in any suspected case to institute delay, hedge an unfavorable diagnosis behind indecision or to attribute the acts indicative of mental aberration to youthful waywardness. The pupillary condition which was noticed by Westphal and more extensively studied by Bumke is present in about three-fourths of the cases of the early stages of the disease but it is an anomaly sometimes seen in perfectly normal minded youths.¹ Its presence also in some cases of manic depressive insanity is not only confusing but is an added indication that we are now including under manic depressive psychosis two quite distinct conditions.

The Westphal-Bumke reaction is not easy to elicit and when observed once should be confirmed by repeated demonstrations. The pupils of the dementia precox patient are almost invariably enlarged but they contract promptly when a bright light is thrown into them. This contraction, however, is not as uniform in the two eyes as it is in health. If now the eye is exposed by raising the upper lid and the observer touches the conjunctiva on the outer side of the globe with the tip of the index finger, there

is, in the normal individual, a contraction of the pupil equal to that when a bright light is suddenly thrown into the same eye, but in the dementia precox patient there is no pupillary contraction to touch. This reaction has been much used by a considerable number of psychiatrists, some of whom have made clinical and statistical reports, though the rationale of the reaction still remains a source of mystery.²

The very positive indications of the Abderhalden reaction in dementia precox strengthen the pluri-glandular hypothesis of the condition of these unfortunate victims of an unknown toxæmia.³ Following Fauser's and Wegener's serologic studies in which, very uniformly, the sex glands and one or more of the other glands of internal secretion gave a reaction indicating the presence in the blood of a definite ferment against these organ albumins, the Italian psychiatrists have published a series of careful reports on the histologic morphology of these glands in health and in mental disease. Gorrieri, (*Riv. spr. d. Fren.*, 1913, 39, p. 263) made a careful study of all the organs in the body in a few cases of mental disease of every sort and kind and Todde, (*Riv. spr. d. Fren.*, 1914, 40, p. 233-300) studied the testicle alone in 200 men of whom twenty-five were dead with dementia precox. There were perfectly obvious morphologic defects in the great majority of these glands not to be accounted for by the immediate cause of death, and this was notably the case, not only with the testicle but also with the adrenal, the thyroid and the parathyroid. The studies of Southard on twenty-five brains from dementia precox patients also show obvious physical focal deteriorations in the cerebral hemispheres.

The blood pressure in dementia precox has long been known to be low, but this condition has not aroused much curiosity or research because these patients are so inactive that little else could be predicted. However, Willi Schmidt (*M. m. W.*, 1914, 61, p. 360) early last year published his observations on the inefficiency of the adrenalin to raise the blood

pressure in dementia precox. When 0.5 ccm. of the 1-1000 adrenalin solution (Parke, Davis & Co's.) is injected subcutaneously into manic depressive patients or normal individuals, the blood pressure rises forty to eighty millimeters of mercury; but the same injection rarely raises the blood pressure in dementia precox patients at all and sometimes even depresses it.

It is not perfectly clear how this reaction is brought about, but it certainly bears some relation to the Westphal symptom. When a solution of adrenalin is placed in the normal eye it produces no dilation of the pupil. In the eye of a large proportion of dementia precox patients, mydriasis appears, however, and is so prompt and so protracted that its action can not be mistaken. (Cords) Neither as a pressor nor as a mydriatic does adrenalin act in a normal manner in patients with this terrible disease.

In 1849, Thomas Addison connected a destructive condition of the adrenal gland with a wasting disease in which a peculiar bronzing of the skin appeared, (Sydenham Societies Publications). This far off observation led to little research until Brown-Sequard in 1856 experimentally destroyed the adrenals and found that the animals died promptly and that rabbits in particular lived only about nine hours after both adrenals were removed.⁴ At the same time Vulpian noticed some color reactions peculiar to the substance of the adrenal glands; a rose red with iodine and a green with ferric chloride.

Not till 1849 was the blood pressure raising or "pressor" action of the gland extract discovered by Oliver and Schafer, (Jour. of Phys., 1894, 17, p. i.) During the following decade the study of this reaction and its biochemistry proceeded with the greatest rapidity in every direction, but all efforts to separate the active principle of the adrenal secretion were unavailing, until in 1901, (1903) J. Takamine isolated a substance which he called "adrenalin" to which T. B. Aldrich assigned the correct empirical formula $C_9H_{13}O_3N$. In 1904 Dzierz-

gowski succeeded in synthesizing a substance having the same or similar physiologic action and a German patent for its manufacture was issued.

There are many ways of recognizing adrenalin. The color reactions are very sensitive and recognize high dilutions. Borberg has recently reviewed the colorimetric quantitative methods. (*Skand. Arch. of Phys.*, 1912, 27, p. 341-420). While the ferric sesqui chloride, he finds, recognizes one to a one or even to a three hundred thousand dilution; the persulphate of potassium (or of sodium) test of Pancrazio, (*Gas. d. hosp. e. d. clin.*, 1909, 30, p. 1513) and Ewins (*Jour. of Phys.*, 1910, 40, p. 317-326) detects adrenalin in solution of 1-5,000,000. The method of Folin, Cannon and Denis (*Jour. of Biol. Chem.*, 1913, 13, p. 477-483) is almost as sensitive, if not quite so, and has many other advantages. It detects adrenalin in dilutions of one in 3,000,000, but, unfortunately, it also reacts equally to uric acid in solutions of one-third that dilution, namely one in 1,000,000.

Comessati, (*D. m. W.*, 1909, 35, p. 576) and Fränkel and Allers (*Biochem. Z.*, 1909, 18, p. 40), Zanfrogini (*D. m. W.*, 1909, 35, p. 1752) and Watermann (*Arch. f. d. g. Physiol.*, 1909, 128, p. 48-66) have each proposed tests for adrenalin having some special advantage in the experience of the authors.

The physiologic action of adrenalin is so prompt, so intense and so uniform that the most sensitive methods of recognizing this substance are biologic. Following the almost coincident discovery of the "pressor" action of extract of adrenal gland by Oliver and Schafer (1894) and Szymonowicz (1895) many ingenious and cunning applications of it have been made. Extremely small quantities of adrenalin, 0.000,3 mg. per kilo, are large enough doses to inject intravenously in rabbits and bring about characteristic symptoms. (Cameron, *Pro. Roy. Soc. Edin.*, 1906, 26, p. 157-171). The reaction is very sharp and appears in a few seconds, but it is transient and the blood pressure after a few (at most two to six) minutes falls sharply and then more slowly and after

a few minutes there is a secondary wave of action raising the blood pressure very slightly and then disappearing for good. If the blood from such an animal, however, is now injected intravenously into a second animal, there is still enough unconsumed or unactivated adrenalin to produce the pressor reaction again (Weiss and Harris, *Pflügers Arch.*, 1904, 103, p. 510-514). The rapid return to the normal of the blood pressure so characteristic of the intravenous adrenalin injection is not then due to a chemical reaction between the blood vessels and the base that results in the consumption or the destruction of the adrenalin.

There have been many studies of the "pressor" action of adrenal extracts under various conditions, some of which must be noticed later, but the extract of each of the glands of internal secretion has its own peculiar action. For example, Bürgi and Traczewski, (*Biochem. zeit.* 1914 66, 417-36) have noticed that with a mixed extract of these glands a stimulating equilibrium was established in the circulation and the heart maintained its normal activity. Each of the several glands of internal secretion has two portions of more or less antagonistic function when measured by any single action. Thus Ossokin (*Zent. f. Phys.*, 1914, 28, p. 59) immunized dogs with extract of the posterior lobe of the pituitary for a sufficient time, after which their sera when injected into other animals produced pronounced and long lasting fall in blood pressure—when the extract of the anterior lobe was used the resulting immunized serum produced a less pronounced and transient pressor action!

In man there is also a rise in blood pressure on the subcutaneous injection of adrenalin, but it is not so sharp or so high as we observe after intravenous injection. When given by the mouth adrenalin is without pressor action but it does cause the contraction of the blood vessels of the mucous surfaces with which it comes in immediate contact. It is on account of this property that it attained its vogue in rhinology. Large doses of adrenalin are toxic and lethal, and even repeated small

doses intravenously encourage and are said to promote arterio-sclerosis,⁵ but this presumption needs further investigation.

The smooth or involuntary muscles are also acted upon by adrenalin while the striped or voluntary muscles are unaffected. (Yas Kuno, *J. of Phys.*, 1915, 49, p. 139). The muscles of the intestinal tract generally (except the sphincters) are relaxed and under full doses of adrenalin, automatic peristalsis ceases. In most animals on intravenous injection of adrenalin the urinary bladder is relaxed but in some animals it is contracted! The uterus of the rabbit and the pregnant cat contracts, that of the non-pregnant cat relaxes. The isolated uterus of a pregnant cat in a bath of one to 350,000,000 adrenalin solution exhibits tetanic contraction. (Kehrer, *Arch. f. exp. Path. u. Phar.*, 1908, 58, p. 366).

The mydriatic action of adrenalin early noticed by Vincent and described in detail by Lewandowsky was utilized by the Meltzers (*Am. J. of Phys.*, 1904, 11, p. 449-454) as a means of determining the strength of adrenalin solutions. They used for this purpose the isolated eyes of frogs. This test is so delicate that quantities as small as 0.000,000,002 grm. have been detected. Thus the smooth muscles of the isolated eye are paralyzed or relaxed by adrenalin, and also in patients suffering of dementia precox. Karl Basch has recently (*D. m. W.*, 1913, 39, p. 1456) shown that adrenalin reacts upon the pupil of thyroidectomized dogs much less rapidly than upon non-thyroidectomized dogs of the same litter.

The mydriatic action of adrenalin (in experimental animals at least) is heightened or increased by protracted preliminary feeding of extract of the thyroid gland with the idea of immunization. It was also the case even if the pupillary nervous mechanism had been interrupted. This may be interpreted to mean that the blood of these experimental animals contained an antithyroid amboceptor. When a similar experiment was undertaken by feeding other laboratory animals with the extract of the anterior

lobe of the pituitary body it produced, after a protracted feeding, a condition of extreme myosis; that is, the pupils of these animals were minutely contracted. There resulted at the same time an exaggerated reaction of the pupils to adrenalin. The feeding of the posterior lobe of the pituitary had no effect on the laboratory animals. (Mattirolo Ganin & DeGamma). This is a condition exactly the antithesis of that observed in dementia precox.

No wholly satisfactory explanation exists of the fact that the uterus of the cat and urinary bladder of many animals react paradoxically to adrenalin. In the uterus of the non-pregnant cat it is presumed that the nature of the myo-neural junctions determines the response of the muscle to adrenalin and to a large number of related amines (Barger & Dale, *Jour. of Phys.*, 1910, 41, p. 19-59) (Elliott, *J. of Phys.*, 1905, 32, p. 401-467 and 1912, vol. 44, p. 374-409). It is possible that the paradox in dementia precox depends in its pupillary phenomenon on the abnormal condition of the myo-neural junctions brought about by the toxins of the primary disease.

There is some reason to think that the toxins, such as we assume are responsible for dementia precox, are capable of changing the character of the myo-neural junctions. These have been furnished by the experiments of Dale (*J. of Phys.*, 1906, 34, p. 163-206) who showed that a preliminary injection of ergotoxin into an animal in which a large rise of blood pressure should be expected was followed by a distinct fall in blood pressure when the "pressor" dose of adrenalin was injected into the vein. Thus the large rise in blood pressure which adrenalin causes in the normal animal is replaced by a smaller depressor effect if ergotoxin has been previously administered.

The dementia precox patient seems in a constant ergotoxin-like intoxication, for the injection of 0.5 ccm. of a 1-1000 adrenalin hydrochloride solution, which is adequate to raise the blood pressure of the normal man and most insane persons 40-80 mm. of mercury, slightly depresses the blood pressure and at the same time fails to produce the normal mydriatic pupillary phenomenon.

This may not, however, be the correct parallel. Further research by the intravenous method of administration of adrenalin is necessary.

Results of experiments on decerebrated cats and rabbits show that adrenalin, epinine- HC_1 and other amines and alkaloids cause constriction of normal bronchioles but that dilation results from these drugs after curare, ergotoxins, apocodeine, pilocarpidine, muscarine, and physostigmine. Tracheal musculature is uniformly relaxed by adrenalin, pilocarpin causes its contraction, and ergomin is without effect. (Golla and Symes, *J. of Phar. & Exp. Ther.*, 1914, 5, p. 87-103.) The subcutaneous and intravenous injection of adrenalin in sufficient doses was shown by Blum (*Deut. Arch. f. k. Med.*, 1901, 71, p. 146) to produce glycosuria, and Straub, (*M. m. W.*, 1909, 56, p. 493) determined the minimum dose that could be safely given without causing glycosuria. This he found to be 0.002 mgm. per minute. Double this rate of injection caused sugar to appear in the urine. The mechanism of adrenalin glycosuria is not yet clear, but those qualified to judge believe that the pancreas is not involved in the process. But, on the other hand, guanin certainly reduces the glucosuric action of adrenalin and the presence of guanin in the pancreas is in some way related to the glycochemic action of this organ. (Degrez & Dorleans, *Compt. rend.*, 1913, 157, p. 946-947.)

It would be interesting to know just how dementia precox patients would compare in glycosuric sensitiveness to adrenalin with the clinical experimental experience of Blum and Straub. This problem lies ready for solution before some young, ambitious clinical psychiatric biochemist. It is well recognized that early in the acute form of dementia precox there is an acetone breath and acetone in the urine, but glycosuria has never been mentioned as a common or conspicuous symptom of this disease.

There are other causes of low blood pressure that must not be overlooked in this connection. The evidences of adrenal disturbances and adrenal incompetency in

dementia precox patients are weighty indeed, but there are poisonous amines developed in the intestine that are also depressants of the arterial tension. These poisonous amines are produced from non-poisonous and useful proteins and probably the most likely one affecting dementia precox patients is the beta-iminazolyl-ethylamine which results from the growth of the *Bacillus aminophilus intestinalis* on a nutrient media containing histidin. This amine is a depressor of arterial tension and a constrictor of the smooth muscle fibres of the bronchi. The liver is the great eliminator of this toxin, but we do not know in exactly what form the excretion appears in the urine—probably it appears as indol-acetic acid. This substance has been found in the urine of one-fifth the healthy and almost one-half of the dementia precox patients in custody. (Ross, *Arch. Int. Med.*, 1913, 12, p. 112.)

The secretion of indol-acetic acid in two cases of dementia precox was greatly affected by the character of the diet, so E. L. Ross, (*Arch. Int. Med.*, 1913, 12, p. 231) concluded that this acid is of endogenous origin. (v. Much, *Q. J. M.*, 1914, 7, p. 439.)

There is one other aspect of the adrenal function which arouses speculation and ought to lead to still more optimistic research in dementia precox. The relation between hydrocephalus and other diseases of the brain and the adrenals was first noticed by Wagler (*Blumenbach's med. Bibliothek.*, 1788, 3, p. 629) in 1788, and afterwards by many authors, especially by Lomer (*Vir. Arch.*, 1883, 98, p. 366). Anencephale are devoid of adrenal bodies. The destruction of the adrenals brings on morbid cerebral changes. Southard (*Am. J. Insanity*, 1914-15, 71, p. 383-403 and 603-671,) has found hydrocephalic conditions in nineteen out of twenty-five dementia precox patients lately studied. Almost fifteen years ago Czerny (*Cent. f. alg., Path. u. path. Anat.*, 1899, 10, p. 281-286) related hydrocephalus to the adrenals by injecting the cerebrospinal lake of animals with finely divided coloring matter and later finding the adrenal

medulla stained with the coloring matter and connected with the cerebrospinal lake by a special series of highly stained lymph canals. He also found the medulla of the adrenals in hydrocephalus deficient and sclerotic, (Levy, J., Thesis, Berlin, 1913.)

Can it be possible that some peripheral infection so acts upon the pluriglandular system in cases of dementia precox as to destroy, pervert or misdirect the adrenal and bring about those serious cerebral disturbances that give color to the disease we know as dementia precox? An analogy is to be found in Grave's disease, or exophthalmic goiter, which is often the result of tonsillar and faucial infection.

It is not unreasonable to expect some method of clinically determining the adrenalin content of the blood. O'Connor (M. m. W., 1911, 58, p. 1439, and Arch. exp. Path. u. Phar., 1912, 67, p. 195-232) and Stewart (J. exp. Med., 1912, 15, p. 547-569) agree that up to the present time this desirable end has not been attained. There may still be means of determining the adequacy of the various glands in early and subsequent stages of dementia precox.

In a few instances decompression operations in cases believed to be cases of dementia precox have been followed by an arrest of the disease.⁶ The fact that the blood vessels within the viscera, especially within the brain, are affected by adrenalin in a depressing and paralyzing manner, (Cow., J. of Phys., 1911, 42, p. 125-143) while other blood vessels are contracted, may bear some relation to the hydrocephalus and the mental symptoms. The cranial capacity in dementia precox patients is limited as compared with the brain weight. The index of Tigges' and the ratio between the brain weight and the cranial capacity is increased in dementia precox.

I cannot conclude this incomplete and hasty review of the evidence that the adrenal gland is under strong suspicion of having a leading part in the production of that symptom complex we call dementia precox, without referring to the influence of adrenalin on the salivary

secretion. In some stage of nearly every case of dementia precox salivation is a conspicuous symptom. Now Langely claims (*J. of Phys.*, 1901, 27, p. 237-256) that the injection of adrenalin increases salivary secretion.

Equally significant to the clinical observer is the fact that asphyxia increases the secretion of adrenalin. (Cannon & Hoskins, *Am. J. of Phys.*, 1911, 29, p. 274-279.) Asphyxia is a very common and long continued symptom of dementia precox, and it seems, in some cases at least, to be due to the spasm and tetanic contraction of the muscles of respiration. Sulphhemoglobinaemia is occasionally seen in the course of catatonia. In spite of everything the blood pressure in dementia precox is low, (Cazzamili, *Riv. spr. fren.*, 1913, 39, p. 98) and the injection of adrenalin will not raise it.

The amount of adrenalin in the adrenals is diminished in asphyxiation. The diminution in the amount of adrenalin is often regarded as the cause of death. In fact the lowering of the adrenal content is a result of the asphyxiation of the organism. (Czubalski, *Zent. f. Physio.*, 1914, 27, p. 580.)

CONCLUSIONS

1. Adrenalin is the only chemically established organ secretion and furnishes an ideal base for physiologic study.

2. The action of adrenalin on patients with the clinical diagnosis dementia precox differs from its action on healthy persons and resembles its action on animals poisoned with ergotoxin.

3. The insensibility of dementia precox patients to the "pressor" action of adrenalin and its abnormal mydriatic action furnish a helpful means of diagnosis which promise with the coincident application of the defensive ferment reaction, both suggestive therapeutic possibilities and avenues of hopeful research.

1. Bumke, Oswald: Pupillen-störungen bei Geistes-und Nervenkrankheiten. Jena, 1911, esp. pp. 249-268.

2. The increased intracranial pressure which the dilated pupil might reasonably portend has been assumed to be the cause of death in two cases of catatonia recently

studied by Nissl, (his last *Beitrage* published April 11, 1914.) He found "brain swelling" or "wet brain." As usual in dementia precox the brain was too heavy for the cranial capacity in both Nissl's cases. See also in this connection Klebeleberg, "Ueber plötzliche Todesfälle bei Geisteskrankheiten." *Z. f. d. g. Neur. u. Pa.*, 1914, Orig. 25, p. 253 and Leppmann, "Ein Fall von Heilung einer Psychose durch Kopfverletzung." *Jahrb. d. schles. Gesellsch. f. vaterl. Kult.*, 1884, 62, p. 157.

3. A complete review of the literature of the application of the Abderhalden reaction in psychiatry was made by Johann Fischer. *D. m. W.*, 1913, 39, p. 2138 and more recently by Nieszytko, *D. m. W.*, 1914, 40, p. 1519. *Z. f. d. g., Neur. u. Pa.* 1914, Vol. 26, p. 546-563.

4. The experiments of Brown-Sequard have lately been repeated by Elliot (*Jour. of Phy.*, 1914, 49, p. 38-53) upon a large scale with twenty-five cats. The second gland was usually removed from three weeks up to nine months after the first. No one of the twenty-five cats died of the first operation and only one cat recovered completely after the removal of the second gland. It was examined and killed nine weeks after the second operation. Nine of the twenty-five cats died on the second or third day. The second gland that was removed was obviously hypertrophied. Sixteen of the cats lived for six or ten days and one of these died on the twenty-second and one on the twenty-third day and one was killed in the ninth week. Most of the cats that lived six days or more had two or three acute ulcers of the stomach, a token of the full digestive powers of the gastric juice. This seems remarkable when we remember that ulcer of the stomach is not seen in patients with Addison's disease, (Finzi, *Vir. Arch.*, 1913, 214, p. 413-432, *Biblio.*)

Elliot notices that the approach of death was announced by the development of a characteristic weakness. When placed upon the floor the cat would walk a few steps and then stand switching its tail, bothered by the difficulty of walking.

Despite this characteristic prostration the animal could be aroused by an alarm to fully coordinated and fairly strong muscular movements. There was no paralysis of the skeletal muscles or their nerves. This was very evident when the moribund cat was placed under a large bell jar and anet the ether intended for its anesthetic. The cat moved almost as freely and as quickly as a normal animal would have done and there was also the usual free salivation. The blood pressure of the dying animal was very low, ten to fifteen millimeters, and was raised very little by its struggles. The blood supply of the cerebral hemispheres became scant and a stiffness set in the fore limbs while the hind limbs commenced an automatic walking rhythm. The intravenous injection of a small amount of adrenalin restored the blood pressure with the full circulation, the rigidity disappeared.

5. Since the use of adrenalin in asthma, this observation has been contradicted by the clinical experience of many reliable observers. (Van Leersum & Rassers, *Beitrag zur Kenntnis des experimentellen Adrenalin-Atherons*. *Z. f. exp. Path.*, 1914, 16, p. 230.)

SELECTIONS

NEUROPHYSIOLOGY

PITUITARY EXTRACT AND THE SALIVARY SECRETION.—Although the influence of an extract of the posterior lobe of the hypophysis upon the circulatory system has been fairly well established, the effect of this extract upon the process of secretion is still a matter of dispute. Some observers note that the secretory changes are to be accounted for by the accompanying vascular effects, while others maintain that there is a direct action upon the secreting cells. The problem is one of profound interest in pharmacology as well as in physiology. An important step toward its solution is provided by the results of an investigation conducted by G. O. Solem and P. H. Lommen (*American Journal of Physiology*, September 1, 1915,) who studied the effects of the extract of the posterior lobe of the hypophysis upon the secretion of saliva.

The above investigators find that pituitary extract causes a diminution in the flow of blood and saliva from the submaxillary gland. The decrease in the flow of saliva is greater than the accompanying decrease in the blood flow. The slowing of blood is less marked if the injection is made during faradization of the chorda tympani than during pilocarpine stimulation, while the slowing of saliva is the same. Pilocarpine is relatively ineffective even when injected seven or eight minutes after pituitary extract. While suprarenal extract normally causes a vasodilatation in the gland (contrary to its action on the vascular system in general) and an increase in salivary secretion, the substance, during the action of

pituitary extract, has the normal effect on the blood flow, but causes a diminution in salivary flow, probably owing to the greater quantity of pituitary extract coming in contact with the gland. When pituitary extract is injected during the action of chrysotoxin the decrease in the flow of saliva sets in before the vasoconstriction in the gland occurs. In five out of seven cases the flow of saliva slowed while there was active dilatation of the gland.

From the above results the general conclusion is drawn that the decrease in flow of saliva following the injection of pituitary extract is due to an inhibition of the action of the secretory nerves of the submaxillary gland, but also in part to the accompanying vasoconstriction caused by direct action on the muscle of the arterioles, on the vasomotor nerve endings, or on both. The decrease in output of blood from the gland may also be due to the decreased activity of the gland.—Med. Rec.

NEURODIAGNOSIS

THE TECHNIQUE OF PSYCHOANALYSIS.—S. E. Jelliffe
(Psychoanalytic Review, Post Graduate.)

In a series of continued articles, the author takes up the practical aspects of the methods of psychoanalysis. In the opening pages he outlines the meaning of the word, the object to be accomplished and first takes up the discussion of the type of cases to be left alone by the beginner. These are the feeble-minded and imbecile, the stupid and the lazy, the gossips and trouble makers and scandal mongers. Hysterical young girls, catatonics, manic depressives, homosexuals, dementia praecox cases should be avoided or taken only under certain conditions.

CLINICAL PSYCHIATRY

INSANITY IN RELATION TO SEX AND AGE.—The Virginia Medical Semi-Monthly notes from the report on the insane in the United States, prepared by Dr. Joseph A. Hill and issued by Director of the Census, that there is more insanity among men than women, as based upon data received from hospitals and asylums for the insane for 1910. In 1880, the two sexes had nearly an equal representation in these institutions, but on January 1, 1910, there were 98,695 males, as compared with 80,096 females in institutions for the insane. Nearly 25 per cent of the males in the hospitals in 1910 were admitted for alcoholic psychosis or general paralysis, resulting from vice and dissipation. These causes being eliminated, the disparity in numbers of admissions between the sexes practically disappears. While the largest percentage of admissions is between the ages of 25 and 50 years, in proportion to the number of people in the same period of life, the number of admissions is larger in old age than in middle life and in middle life than in youth.

DANGERS TO ATTENDANTS IN MENTAL WARDS.—The Aug. 7th number of the Hospital notes the following:

A male nurse called upon an inmate to assist in restraining a patient in the mental ward, when the patient, a one-legged man, kicked the inmate, who afterwards died. He was, however, suffering from chronic Bright's disease, and the medical evidence showed that the man died from syncope from that disease, which was probably accelerated from shock consequent upon the injury. The case shows that it is most inadvisable for Poor-Law authorities to be dependent on the inmates, and consequently upon untrained men, in cases of this kind, though there is always the question of keeping a large staff in waiting for exceptional emergencies.

NEUROPATHOLOGY

THE BLOOD IN EPILEPSY.—Rosenthal comes to the following conclusions:

1st. In about half of the epileptics there is an increase of the anti-proteolytic inhibiting cells in the blood serum examined with relation to the time of the attacks.

2nd. In the preparoxysmal stage there is usually an increase of the antiproteolytic strength of the serum, which diminishes rapidly to the normal after the attack.

3rd. In the interparoxysmal stage the antiproteolytic control in the blood serum is either normal or only slightly increased.

4th. A marked increase of the antiproteolytic strength in epileptic women occurs immediately before menstruation and is often accompanied by the attacks, although this condition may occur after the convulsive seizures.

5th. Premenstrual increase of the antitryptic strength occurs in normal women, although much less frequently than in epileptics.

6th. The convulsive seizure as such induces a transitional increase of the antitryptic substances. This increase depends upon the intensity of the muscular disturbances during the attacks, is subject to various changes in intensity, and quickly disappears.

In genuine epilepsy there is congenital defect in function of the thyroids and parathyroids, which has definite effect upon the activity of the digestive organs, possibly in reducing the amount of the digestive ferments and the muscular activity of the intestines resulting in absorption of the waste products. In consequence of this albumens and fats are incompletely digested and their side-products are not properly eliminated. It is probable also that inactivity of the breathing apparatus results in the accumulation of carbon dioxide in the blood. These are the different factors leading to improper conditions of the cerebral cortex, to which must be attributed the convulsive seizures. The three organs that are especially

effective in this cycle of events are the thyroid, the hypophysis and the thymus.—Dr. Henry Hun (Neurological Excerpts in Albany Medical Annals) from *Die Erklärungen der Erscheinungen bei Epilepsie* and D. C. Bolton "Deutsche Zeitschrift für Nervenheilkunde."

NEUROTOXICOLOGY

HALLUCINATIONS AFTER COCAIN.—V. E. Henderson, of Canada, quotes numerous cases of erotic hallucinations following the use of cocaine as a local anaesthetic, and warns dental practitioners against its use, unless a third person be present. A case is quoted in which cocaine pressure anaesthesia was used to deal with an exposed tooth-pulp. Later the patient, a girl of 16, made charges of indecent assault against the dentist.—(Dominion Dent. Jour.) Med. Times.

NEUROTHERAPY

HEALTH COMMISSIONER GOLDWATER of New York City has directed the sanitary bureau to investigate conditions of artificial light, congestion of workers, questions of ventilation, air cooling devices and other matters in the financial district. Office workers in sky-scrapers have been too much neglected.—Physical Culture Items, September.

TEMPERANCE 5500 YEARS AGO.—A foreign exchange has this interesting paragraph: There is still in existence an Egyptian papyrus of the date of 3500 years before the Christian era, which contains the following caution:

"My son, do not linger in the wineshop or drink too much wine. It causeth thee to utter words regarding thy neighbor which thou remembrest not. Thou fallest upon the ground, thy limbs become weak as those of a child. One cometh to trade with thee and findeth thee so. Then say they, 'Take away the fellow, for he is drunk.' " This is believed to be the oldest temperance lecture in existence.—Christian Herald.

CLINICAL RESULTS WITH THE PHYLACOGENS.—Under the above caption, Dr. R. W. Locher, Grafton, W. Va., in the Memphis Medical Monthly, has this to say: "In judging the therapeutic value of a new preparation, it is advisable that a great number of case reports be considered; and in order that the medical profession may have a great number of cases from which to judge, it is the duty of every physician to report such results as he may have. The Phylacogens are of comparatively recent origin, and yet even at this early date they have displayed their ability to produce satisfactory and in some cases remarkable results in the treatment of a great variety of pathological conditions."

QUININE VS. HYDROPHOBIA.—Dr. H. L. Harris of St. Louis gives the clinical history of seven cases of hydrophobia together with a case clinically similar with recovery following a similar case under the administration of quinine subcutaneously in exceedingly large doses as follows:

Treatment and Result—At 5 p. m., August 29, 15 grains of quinin and urea hydrochlorid, dissolved in 3 c.c. of salt solution, were administered intravenously. This dose was repeated at 7 p. m., 9 p. m., 11:30 p. m., 60 grs. in six and one-half hours, and on the next day at 9:45 a. m., and 11:30 p. m., making a total of 90 grains within twenty hours. Following the second injection at 7 p. m. the patient said all pain in the thigh and over the area of the bite had disappeared. At 7:30, August 29, he drank without difficulty 6 ounces of milk and an equal amount at 11:30 p. m. At 7 a. m., August

30, he drank 6 ounces of milk, 6 ounces of coffee, and ate two crackers and a slice of bread.

He had, however, spent a very restless night, and on account of a fine tremor and a nervousness which suggested delirium tremens, he was given at 9:30 a. m. 4 drams of paraldehyd, and an equal amount at 1:30 p. m. He slept at intervals throughout the day and the following night. He had no return of the pains or the difficulty in swallowing and was discharged September 2, four days after his admission.

The patient was an itinerant umbrella maker, aged seventy three. The man was greatly excited. This man had been bitten five or six times before and made but little of it, but this time when he entered the laboratory he was greatly excited and nervous and apprehensive with hot pains tingling and dysphagic contractions at attempting to drink water, though he once succeeded in swallowing a sip.

Though Dr. Harris gives in his article the record of seven quinine cases of rabies, this case may possibly have been one of lyssophobia which the enormous quantity of quinine given in so short a space of time (the amount being greatly sedative and taking complete possession of the brain), may have suspended and dissipated the psychic hydrophobia.

The record, however, is therapeutically of great importance and should be borne in mind and repeated in other cases.

CLINICAL NEUROLOGY

ADOLESCENT INSANITY AND NATIONAL HEALTH.—C. W. Burr, in discussing the prevention of adolescent insanity, states that one must stop the present tendency toward the easy life if one wished to develop a strong

race and bring down the insanity rate. Moral and mental health are closely related, and the newest philosophy of life does not make for mental health. There is too much education and not enough training. There are too many people who read and there is too little that is worth reading. One hears too much of the rights of people, too little of their duties. Untold millions are spent in money and effort in trying to remove the stresses and strains of life, and relatively little in training youths to withstand stress and strain. Fortunately there are a good many cave men left, men who do not philosophize and are not learned and who of course are far from being sweetly good and super-refined, but who are firm fibred, with healthy natural instincts and mate with their kind, and train their offspring to have contempt for weakness, belief in self-dependence, respect for law, a desire for true righteousness and love for strength and health. These cave men will by their descendants regenerate the race.—New York Med. Jour. and Med. Rec.

INTERNAL SECRETIONS AND THE PSYCHOSES.—T. B. Hyslops emphasizes the importance of the internal secretions in their causal, coincidental and sequential relationship to mental disorders. He discusses particularly the thyroid, the parathyroids, the epithelial layer of the suprarenals, and the glandular portion of the hypophysis cerebri. There seems to be a definite interrelationship between the various internal secretions and clinical evidence seems to indicate that the periodicity in recurring and alternating psychoses may be due to rythmical variations in the production and elimination of the various secretions.—E. M. Hammes' Gleanings of Progress for St. Paul Med. and Surg. Jour.

DYSPNEA IN RELATION TO BLOOD REACTION.—In 1913 Lewis, Ruffel, Wolf, Colton, and Bascroft described a peculiar symptom complex associated with reduced alkalinity of the blood occurring in elderly subjects. This symptom complex comprises continuous dyspnea,

often intensified for short periods, especially at night; good or fair blood aeration as judged by the absence of cyanosis; Cheyne-Stokes breathing, with or without full apneic periods; an increase of pulse rate (80-100 per minute) and a subnormal temperature. This syndrome may be associated with uremic or cardiac manifestations, but the association is not a necessary one.

In a series of further observations upon this subject, Thomas Lewis and Joseph Barcroft (*Quarterly Journal of Medicine*, January, 1915) note that only in rare instances can the above symptom complex be recognized, owing to the accompanying conditions—cardiac, renal, or respiratory—to which the dyspnea is usually attributed. In the later series of cases the authors have studied the blood "acidosis," i. e. the excess of acid, exclusive of CO_2 , in the blood as compared with the bases present, this acidity being determined by the percentage of saturation of the blood with oxygen when exposed at 37 deg. C. to 17 mm. pressure of that gas. The percentage of saturation of normal blood when exposed to the pressure is 75 to 80. In proportion as the quantity of acids relative to bases is excessive, the percentage saturation drops.

A NEW THEORY OF AUTOSEROTHERAPY.—The statement is often made that in certain cases of infectious disease antibodies are not produced, or not produced in sufficient quantities. In such way we explain the failure of the pneumonia crisis, the development of relapses, etc. Yet we have no proof that antibodies do not form in these cases. It is probable that they are always present and that for some unknown reason they are inert, or rather latent, and require activation by some unknown substance. Views similar to the preceding were expressed by Koenigsfeld at a meeting last winter of the Freiburg Medical Society (*Deutsche medizinische Wochenschrift*, June 17.) It occurred to him that if serum containing such latent antibodies could be taken from the patient's blood and then reinjected it might become activated and would then prove an ideal serum. He tested the idea on some

typhoid cases—26 in number, Into each patient he injected daily from 2.5 to 4 c.c. of the patient's own serum. The improvement, while transitory, was startling. The fever fell, the diazo reaction became negative, the mind became clear, diarrhoea ceased, and appetite appeared. The average duration of the disease was from 18 to 22 days. In discussion Ziegler bore witness to the astonishing change caused by the injections, which appeared to prevent the development of complications. Berke had tested the principle in relatively benign cases of tetanus and noted the same specific influence. Of great value is the fact, if fact it is, that the patients carry a specific remedy with them.—*Med. Rec.*, Sept. 4, 1915.

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The ALIENIST AND NEUROLOGIST is always glad to receive articles or photographs from subscribers or friends and material acceptable for publication. Address manuscripts and photographs to THE ALIENIST AND NEUROLOGIST. For return of non-accepted manuscript send addressed envelope and sufficient postage.

Any comment, favorable or unfavorable, specifically set forth, is always welcome from friend or enemy or "mouths of wisest censure."

NOTICE TO NEWS AGENTS

This magazine must not be expected to print whole pages of commercially devised, fulsomely laudatory puffing of proprietary advertisements, prepared by non-medical commercial agencies who know nothing of the facts of therapeutics nor of the medical code of ethics. Some of the puffa are so far from the truth that they are an insult to medical intelligence and do more harm than good to worthy proprietaries.

Such proprietaries as we carry speak for themselves with physicians, especially when their composition appears. Our readers are discriminating judges of what they want.

CONCERNING RENEWALS OF SUBSCRIPTIONS

This magazine would be much indebted to its regular subscribers and advertisers if they would renew by direct communication with this office, especially in the United States, and not through news agents.

CHAS. H. HUGHES, M. D., Editor and Publisher.

H. L. HUGHES, MANAGER.

Editorial and Business Offices, 3858 West Pine Boul.

EDITORIAL

A DELIBERATE MURDER FOR FIFTY CENTS refused on request, was confessed in court by a negro domestic male employee lately. The confession was made without police compulsion, no thirty-third degree torture process being employed to bring out the confession. The negro stated that he asked for the half dollar the second time after a short spree and, being refused again, shot the lady. And this conduct and confession did not suggest the

probability of insanity, but brought a prompt judicial first-degree murder sentence to be executed in sixteen days.

This recalls the case of an ex-confederate veteran who, in a public place before numerous witnesses, shot and killed a friend for declining to change a five dollar bill. This trivial circumstance, with so tragic an ending, excited the suspicion of insanity and closer inquiry elicited the fact of insanity and that the poor fellow had a chronic suppurating gun shot wound and that he had been confined to his bed with septic fever before the advent of which he had acted in many strange ways, one of which was leaving the field where plowing was being done, running to the house with the startled cry "the Federals are coming," although the civil war had been ended several years before. A complete psychological inquiry and physical examination established his mental disease to the satisfaction of judge and jury.

Disproportionate violence without approximately adequate cause like these trivial circumstances in individuals of natural evenness of mind *prima facie* suggest deeper inquiry as to the existence of disease impairing the mind.

While the so-called insanity dodge has kept sane culprits from the gallows, latent insanity is in the brains of many not suspected till a crime disproportionate to its cause reveals the startling psychopathic brain storm.

THE DEATH OF DOCTOR CARLOS J. FINLAY OF HAVANA, CUBA, at the age of eighty years bereaves the medical profession of one of its great observing benefactors. The world will cherish his memory as the original discoverer of the mosquito cause of yellow fever propagation. He first placed this insect under suspicion. The *stegomia facia* was corralled as the murderous culprit of "yellow jack" and through the co-operation of medical colleges following his leadership the plague of the southlands was stayed. Healthy Havana, once a septic death bed for Northern blood, and Panama with Gorgas' aid now attest his scientific immortality. Though a native

Cuban of Scotch descent, he was American educated in medicine. Throughout the land his immortal name, with that of Lazear, Gorgas and others is "writ high on the rounds of Fame's triumphal arch."

The great and appreciative medical profession everywhere now honors his worthy memory.

IGNORANCE IN THE HARRISON LAW.—Congress in its ignorance has enacted that apomorphin is narcotic and habit-forming; it must be so recorded under penalty of fine or imprisonment of the prescriber, although apomorphin will still continue to cause vomiting when administered in proper dose in defiance of congress and all others in authority. Presumably the Harrison law could only be brought into harmony with science by catching all the congressmen who voted for the bill and administering to them one tenth of one grain of apomorphin hydrochloride hypodermatically with the hope that they might be impressed with the fact that an emetic is not a habit-forming drug. A lie cannot be made truth by act of Congress.

Dr. Reynold Webb Wilcox thus arraigns this anti-narcotic law. This Magazine has noted this fact before in its reference to this law and the improper inclusion of apomorphia.

INSANOIDS AND CRIMINAL IMBECILES AT LARGE are perilous and the peril is growing. Legal parole, with a view to the reform of the most of these unfortunate defectives is like trying to rub out a hole burned in cloth. The hole needs a patch of good material from a new birth loom. Eugenists take notice.

BETWEEN THE EUGENISTS AND THE ANTI-RACE SUICIDERS the law should strike a happy physiological medium, promoting the birth and multiplying the same of sound in mind and body and preventing the mind virtually unfit, the diseased and degenerate through revocation of their liberty to limit the unfit for the salvation of the human race from decadence.

Nurturing foods through congenital inebriety, idiocy, insanity and other disease fostered by insanity and legal inhibition of woman's right to limit degenerate offspring will ultimately make the nation weak.

A BETTER MEASURE IF PSYCHONEURONE STABILITY among the crowned heads of Europe (not excepting the heads of the Pope and John Bull) might have saved the world the awful calamity of war throughout the most of Europe and indirectly the civilized world (God save the mark.)

Why could not little Servia, big Austria, the Czar of all the Russians, the "omnipotent" Pope and the balance of the autocratic Power Gods have averted this calamity?

SANITATION ON THE EAST SIDE STRUCK A SERIOUS OBSTACLE when a dairyman, Karo Stumoff, was found washing his hands in a pail of fresh milk. He received from the American Magistrate a short lecture and too small a fine and it does not appear that the pail of milk was emptied on the ground after his dirty ablution. This is a peculiar sample of some of the embarrassments from ignorant and filthy sources suffered by our sanitary officers in their efforts to save the people from micropathic dissemination.

It does not appear that this is the first time this dirty thing may have happened. Nor does it appear what disease may have been traced to this dirty disease spreading habit.

DR. T. D. CROTHERS' of Hartford, Conn., appointment by the Carnegie Eugenic Commission, Chairman of a Commission for the Study of Alcohol was a good one. Dr. Crothers' long interest and devotion to the study of alcohol in its effects on the human system justifies the wisdom of his selection for this important position.

We shall be glad to have for our pages some of the research results of this important work.

A CRIMINAL INSANE HOSPITAL FOR MISSOURI.—The Governor of Missouri wisely advises this provision for Missouri's criminal insane, and some day this commonwealth will be in line with the enlightenment and humanity of the age in this important matter. Many of the criminal insane have latent propensities that justify their segregation both from non-insane criminals and from non-criminal insane. Pennsylvania is the latest State to provide practically a scientific psychology for the psychopathic insane.

CORRECTNESS OF ONOMATOLOGY is even more an index of character in science than in daily speech.

In medical onomatology, as in ordinary speech, wanton incorrectness is an offence against both truth and good manners.

The uncultured mind revels in uncouth expressions. Incorrect medical onomatology is on a par with slang in ordinary speech; the use of either betrays ignorance or a mind devoid of fine feeling.

A. ROSE.

THE TROUBLE IN EUROPE seems to be coercive religion and territorial aggrandizement which might be remedied by a confederated agreement and inviolable mutually governing constitution among the crowned heads, enjoining non-intervention in these vital matters; a sort of Stephen A. Douglas sort of non-intervention squatter sovereignty, as it were, for Europe and a little more of the spirit of fair play and level headedness. But will they ever come to it or will they continue to fight until they are all bankrupt, only to go at it again after recuperation? If it ever comes to Europe again!

THE ALIENIST AND NEUROLOGIST is as good as a book on Psychiatry and Neurology written by the world's best authors, at only five dollars a volume and out in advance of the books' delayed publication.

THE CHICAGO MEDICAL SOCIETY conducted another epoch-making annual meeting of Alienists and Neurologists of the United States for the purpose of discussing Mental Diseases in their various phases, July 12th to 16th, 1915.

This was the fourth meeting of the kind. The program was extensive. Much interest was displayed and great good will come of it to the general profession.

THE NOISY, RASPING, BOUNCING, IRON WHEELED STREET CAR, running on disjointed, uneven, unlevel tracks, often with flat wheels on screeching rails with shaking underwork and chains, have made insomnia a popular ailment, sent city sleepers, who could afford it, out of town or across the river to sleep, besides depopulating and depreciating many of the best down-town residences along the rail lines. And because of all this cruel unconcern for the public, the jitney has come to stay with us. Besides all this as a contributory strain on the endurance of the brains of city people is the megaphone strident and falsetto voices of the newsboys crying out, in discordant unison, their papers, which everybody can see they have and the head lines thereof. We beat London, for there the newsboys are only allowed to show their papers and the head lines are large enough, as here, for any but the blind and the latter can guess without all the needless deafening ear-splitting racket such as our newsies indulge in.

BIRTH CONTROL FOR CAUSE, especially for lawful medical reasons, should be in effect where parental syphilis, insanity, alcoholism and other race degenerating influences affect the offspring.

The present laws interdicting conception without qualification are indirectly promotive of race suicide through entailed degeneracy in too many instances.

APROPOS OF THE STUDENT'S TIME LIMIT for medical education we have the Post Graduate Medical Schools. These valuable finishing and perfecting institutions of

instruction were wisely conceived by our wise and philanthropically impulsed forebears in medicine, with exalted and utilitarian conceptions of the needs of the more hastily made, than now, physicians of more limited time and means than the present day average medical aspirant is supposed to have at his command. But these worthy aspirants to become regular, reputable, ethical physicians are yet with us in sparsely settled, financially limited communities which yet need good doctors.

THOUGH EHRLICH HAS GONE FROM US his memory abides in the repute of Salvarsan, his side chain discovery and other contributions from the laboratory to clinical medicine. He died August 20th at Bad Homburg, aged 61 years.

We miss him as we do our own Austin Flint, who was a clinician of the highest rank in general medicine and psychiatry.

Flint's physiology is a memorial of his indefatigable research. Austin Flint was a worthy son of a noble sire in medical esteem. He was to America what Ehrlich was to Germany in professional regard.

HEMADENOLOGY is the name of Doctor Sajous' new clinic specialty connected with the Philadelphia Charity Hospital. It will include investigation of the relation of the internal secretions to disease in general and special.

THE MASSACHUSETTS SOCIETY FOR MENTAL HYGIENE has opened an office at Room 313, Ford Building, 15 Ashburton Place, Boston. The officers of the Society are: the Honorable Harvey H. Baker, Boston, President; Doctor Walter E. Fernald, Waverly, Vice-President; Doctor Charles E. Thompson, Gardner, Secretary; John Koren, Esquire, Boston, Treasurer; Executive Committee: Miss Edith M. Burleigh, Boston; Doctor James J. Putnam, Boston; Doctor Alfred E. P. Rockwell, Worcester; Doctor Henry R. Stedman, Brookline; Professor Robert M. Yerkes, Cambridge. Doctor Frankwood E. Williams,

formerly Resident Physician at the Psychopathic Hospital, Ann Harbor, Michigan, and first Assistant Physician at the Psychopathic Hospital, Boston, has been appointed Executive Secretary.

PHOTAUGIOPHOBIA is proposed by Ernest Clarke (Medical Press and Circular, Aug. 4, 1915) to connote a shrinking from the glare of light in contradistinction from photophobia, which signifies literally a shrinking from light.—(Ed. Med. Rec., N. Y., 10/2/15.)

THE UNSTABLY BRAINED HAZING RUFFIAN is likely to get a salutary and merited check in the Colleges, since the late Indiana tank episode and violent death of a hazed student and the consequent abolishing of hazing. The hazing idiot ruffian should be excluded from all colleges or put in annex lunatic asylum schools for the idiotic and abnormal minded, with adequate rational police discipline.

Reputable colleges should aim to train only the stable minded in right acquisition and level headedness.

What are hazing ruffians fit for outside of institutions for Golden Rule rational restraint?

The Army and Navy should do away with the cruel uncivilized business. Brutal hazing minded cadets are material for martinet officers.

REFERRING TO PSYCHIATRY IN MEDICAL PRACTICE T. D. C. in the Medical Herald says:

"Outside of all theories, speculations and dreams, there is a great land of practice awaiting the capable physician; the physician above the average man of today, with a larger, clearer insight, is the one who is wanted and will be welcomed and employed constantly, whether he is in a small village or in a crowded city."

The *Alienist and Neurologist*, founded in 1880 and continuously published since that date, was established and is continued for the very purpose of fostering this

line of observation and treatment in general as well as special practice and it has lived to see the great awakening in this direction, as shown in the Chicago Medical Societies and other psychiatric auxiliary organizations. This aspect of medicine has been taught by the editor of this Magazine in his college lectures on psychiatry and neurology during all the forty years of his lectureship, even during the brief civil war period, when by invitation he lectured a few lectures on military surgery in the St. Louis Medical, by request of Dr. John T. Hodgen.

DIAGNOSIS vs. AUTOPSY.—Frederick S. Lee Dalton, P.H.D., Professor of Physiology, Columbia University, in the December, 1914, Jour. of the A. M. A., on the Relation of the Medical Sciences to Clinical Medicine incidentally includes Dr. Richard Cabot's following table of comparative percentages between what he terms mistaken diagnosis found by him of three thousand patients, who have died in the Mass. Gen'l. Hospital of pathological conditions actually found at necropsy and the diagnosis made during life from the clinical findings. He found the percentages of what he terms mistaken diagnosis to be as in the following table:

PERCENTAGE OF MISTAKEN DIAGNOSIS FOUND BY CABOT

Acute nephritis.....	84	Phthisis, active.....	41
Acute pericarditis.....	80	Aortic stenosis.....	39
Hepatic abscess.....	80	Septic meningitis.....	36
Chronic myocarditis.....	78	Brain hemorrhage.....	33
Vertebral tuberculosis.....	77	Mitral stenosis.....	31
Bronchopneumonia.....	67	Gastric cancer.....	28
Renal tuberculosis.....	66.7	Tuberculous meningitis.....	28
Suppurative nephritis.....	65	Cerebral tumor.....	27.2
Peptic ulcer.....	64	Chronic glomerulonephritis.....	26
Acute endocarditis.....	61	Lobar pneumonia.....	26
Hepatic cirrhosis.....	61	Cancer of colon.....	26
Thoracic aneurysm.....	50	Aortic regurgitation.....	16
Chronic interstitial nephritis.....	50	Typhoid fever.....	8
Miliary tuberculosis.....	48	Diabetes mellitus.....	5

Yet such a comparison of autopsies with previous clinical findings represents in many cases rather results or subsequent sequences due in many cases to progressive disease or intercurrent sequences due to intercurrent circumstances and environing influences such, for instance,

as a septic hepatic abscess diffusing its toxæmia to meninges or heart or other organ reached and infected through the poisoned blood or even the possibility of an empoisoned suppurative nephritis or an abdominal or other peritonitis.

A patient may be put to bed with cerebral congestion which may terminate in arterial rupture and brain or other hemorrhage, likewise a pulmonary congestion in the beginning, of the lungs or throat or other organ may ultimate in tubercular infection and be carried to the autopsy table.

The inceptions and endings of disease are often dissimilar and different so that the conclusions are different at an autopsy finding from the initial diagnosis; that the latter was a clinical error in diagnosis is not always to the disparagement of the clinical diagnostic skill nor just. Post mortem findings at autopsy are results of a morbid process or of morbid processes which may begin in one viscus or system of the organism and end fatally in another. Reasoning *a priori* from the dead house to the original disease and the doctor is liable to prove fallacious. *Post hoc ergo promptor hoc* can not always be logically applied. We can not always tell from examining the debris of a burned out building exactly where the fire started or who has been the incendiary or how many may have started the fire. We may only reason approximately. Microbic and bacterial invasion and the everywhere traveling blood, the omnipresent and interrelated nervous system and the ductless glands closely and integrally related also are to be reckoned with in estimating incipient and continuing disease and their post mortem ending. Besides though, to seek to put blame to exclusively on a viscus or a few viscera and to confine it there whereas it is the entire system at fault. We are

often too prone to confine our observation to a spot within sight or touch and go no farther in our post mortem conclusions from what we may find and we sometimes conclude erroneously that the single result if apparently grave to have been the sole cause *ab initio*. But we are learning. Sajous and Ott and others have added some additional light to our powers of diagnostic vision to discern the once unseen, especially in ante-autopsic neuropathology.

MEMORIAL

A MEMORIAL MONUMENT to Dr. Lazear who gave his all, even his life, to the proof that the mosquito propagated yellow fever, and thereby made Cuba and latterly the Canal Zone habitable to the white man, was suggested in Dr. W. W. Campbell's recent presidential address at San Francisco, and so say we all of us.

CORRESPONDENCE

THE MAXIMUM MENTAL POWER AGE OF MAN, *Sub-Judicæ Scientia*. We are disposed to doubt Professor A. Lawrence's recent statement in his late baccalaureate address to the seniors of Harvard.

The president of this great college is reported to have said: "Man reaches his full growth physically at about 18 or 19, and then begins to lose his keener perceptions at about the age of 23, the physical maximum. The mental maximum is reached a great deal earlier than most people suppose; Coleridge wrote his best poems when 29 years old and many other famous men have accomplished their best work at about his age."

And many other famous men have records of great achievements—Edison, Marconi, Osler, the Wrights and others are yet doing great things as did Goethe, Bunyan and Milton, Alexander Graham Bell and too many others to mention.

OBSERVER.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

FALTA'S DUCTLESS GLANDULAR DISEASES.—By Wilhelm Falta, Vienna. Translated and edited by Milton K. Meyers, M. D., Neurologist to the Lebanon Hospital and to the dispensaries of the Jewish and St. Agnes Hospitals, Philadelphia. With a Foreword by Archibald E. Garrod, M.D. (Oxon) F. R. C. P., (London) F. R. S.

"The influences of the glands of internal secretion in which category are included other organs besides the glands which are classed as ductless, hold a very prominent place in medical thought and investigation, as witness the many discussions which took place in various sections of the 17th International Medical Congress, London, 1913, and in many informal gatherings of its members from all parts of the civilized world. There is indeed no department of physiology in which more has been learned from the experiments which nature herself has carried out."—From the Foreword.

With 101 illustrations. Octavo. About 700 pages. Now ready. P. Blakiston's Son & Co., Publishers, 1012 Walnut Street, Philadelphia. Price seven dollars net, and a bargain.

The numerous illustrations present a complete clinical picture of the author's subject and his theme relating thereto are fully presented with the illuminating plates.

The text, in fact, supplements from an intellectual source, as though a lecturer were giving a post graduate course at the bedside and clinic.

The book is thoroughly up-to-date both in text and the extensive literature given. In fact the author is lucidly advanced in his descriptions. The chapter on diabetes and its complications is exceptionally enlightening.

The elimination of Ketone bodies, salt, metabolism, anabolism, catabolism, mongolism, giantism, diseases of

the sexual glands, eunuchoidism, diseases of the thymus glands of the parathyroids, the suprarenals and the hypophysis and the pluriglandular diseases are shown in clear and somewhat novel light, as well as the insular apparatus of the pancreas.

This book should be in every modern medical library. Though edited by a Falta we find no fault in this valuable book.

SOLUTION AND REMEDE—Par Dr. J. A. Riviere, President de l'Association Medicale Internationale contre la guerre. *Annales de Physiotherapie.*

As an honorary member of this distinguished Association (an honor we fully appreciate) the force of the plea and all efforts for peace, between the nations of Europe and all the nations of the earth, appeal to us as philanthropist and physician.

The approbation of the Prince of Peace—His Fatherhood and the Brotherhood of man should be sought in our day and generation of advancing civilization!

The Divine voice—"Peace on earth and good will towards men," is drowned, just now, in Europe, in the tumult and noisy carnage of war, unexampled in the history of human conflict, where the overhead heavens and the under sea turn with violence and the pestilence of man poisoned air, have added unprecedented horrors of international murder on battallioned fields of carnage, such as former records of inhuman murderous strife never before witnessed. Humanity and civilization are marching backward to reciprocal extinction and decadence, in blood and destruction.

But, Dr. Riviere! the still small voice of conscience will yet be heard above the din of battle and crippled, exhausted contestants such as may be spared from the bloody conflict, will listen to and act upon your plea.

The escaped remnant of death will feebly hear after a time and approve and attempt an exhausted reparation of the devastation wrought.

Humanity may yet have hopes that all the blood crowned of Europe cannot postpone forever.

THE ONSET OF GENERAL PARALYSIS, by Charles Ricksher, M. D., Pathologist, State Psychopathic Institution, Kankakee, Ill. The author, from his standpoint of extensive clinical observation, is entitled to credence.

He says: (from Johns Hopkins Hospital Bulletin, No. 291, May, 1915.)

"The dire results which often follow its non-recognition warrant a more extended study of the early symptoms than has heretofore been given to them. The finding of the treponema pallidum in the brain, and the almost universal finding of positive Wassermann reactions in the blood serum prove conclusively that it is one form of syphilis which, if discovered before gross organic changes in the nerve cells and fibres have occurred, may react to ~~treatment~~."

He cites:

"Two cases to show that paresis may occur without the ordinary physical signs which are emphasized in the text books" and concludes that "we do not, unfortunately, have any definite single mental picture which is pathognomonic, and consequently must rely to a great extent, in our doubtful cases at least, upon the laboratory findings. The lumbar puncture is now recognized as a means of clearing up some doubtful diagnoses and there is no reason why it should not be employed in every case where there is a question. In atypical cases, especially those with a history of a luetic infection, it should be obligatory. There is no questioning the fact that in the early recognition of paresis is our only hope of curing it, if there is any cure to be made."

Syphilographers and alienists should be especially interested in this well written paper.

L'ENFANCE ANORMALE.—Revue Mensuelle des Questions de Médecine, de Pédagogie et d'Assistance Relatives aux Enfants Anormaux. Publiée par Le Dr. Ar-

mantaire Courjon, Ex-Interne des Hopitaux, de Lyon; et Louis Grandvilliers, Ex-Professeur a l'Institution Nationale des Sourds-Muets de Paris, et a l'Asile-Ecole de Bicetre. (With the collaboration of a long list of the most eminent medical men of the nation.)

This interesting review of medical and pedagogic subjects, also designed for the better understanding and study of abnormal children, came to us shortly before the present European war with the handsome portrait of that corypheus of French medicine (69 years, 1840-1909) *Medicin de Bicetre*. Bourneville's pioneer interest and work in these subjects make a gift to the profession of great interest and value. - Also the same may be said of Marie's contribution to these subjects as well as the collaborators of this estimable magazine.

And here we are reminded of the forceful contributions to the Eugenics of our American Children by the work of Robinson Lydston, Havelock Ellis and others, the latter in *Physical Culture Magazine*. The latter also has a fine feature cut of our intellectual and eminent friend, Havelock Ellis.

THE FIRST VOLUME, NUMBER I of the New Journal of Laboratory and Clinical Medicine reaches us too late for the extended review we should be pleased to give it.

Its editor-in-chief, Victor C. Vaughn, which is *prima facie* commendation of its merits and the associated staff are certainly no detraction therefrom. Its contents are all of valuable interest to the practicing and philosophic physician who considers his patient in all scientific relations, especially in all chemico-biologic aspects.

A new method of anaesthesia by Jackson, laboratory and clinical examinations by Dock, Precancerous Skin by Engman, all of St. Louis, Specific Treatment of Typhoid by Gray of California, Staining Sections of Living Tissue, by Wilson of Minnesota, Intestinal Stasis and Intoxications by Wooley of Ohio, Probable Toxic Effects of

Parathyroid (prolonged use) by Morris of Ohio, Laboratory methods and important editorials by the associated editors make up the contents.

No physician in active practice could well do without this new magazine. We hope it may live long and prosper. Price \$3.00 per annum. The C. V. Mosby Company, St. Louis, are the publishers.

WE TAKE PLEASURE in calling attention, to commend, Jelliffe and White's "Diseases of the Nervous System; a text book of Neurology and Psychiatry," and to ask for it careful attention. In this text book the authors have described the diseases of the nervous system in the order of their evolutionary development, beginning with those biophysical and biochemical syndromes which are indicative of disturbances at the phylogenetically lowest, the vegetative level of the nervous system.

This excellent book is distinctive and up-to-date, presenting a connected view of the subjects treated in the light of modern understanding of the internal secretions of biological and biochemical, as well as clinical. The evolutions of the biological laboratory are brought to the bed side. The venereal, arterio-sclerotic and toxic syndromes and relations are well elaborated and withal this treatise is eminently practical, as its distinguished authors are being engaged in daily practical clinical work in the domains of Neurology and Psychiatry. Phila. Lea & Febiger, 706-710 Sansom Street, are the well-known publishers.

THE CRIMINAL IMBECILE (Illustrated)—An analysis of three remarkable murder cases, Henry Herbert Goddard, author. Author of "Feeble-mindedness," "The Kallikak Family." The MacMillan Co., Publishers, New York, London, Chicago.

Dr. Goddard, whose study of feeble-mindedness has disclosed some astounding facts—as is shown in his books, "The Kallikak Family" and "Feeble-mindedness, Its Causes and Consequences"—here analyzes three

murder cases in which the Binet tests were used, accepted in court and the accused adjudged imbeciles. Three types of defectives are illustrated in the three cases.

To every thinking citizen this book appeals with potent interest. It will be found especially valuable and instructive to all teachers, students of feeble-mindedness and of social problems and to criminal lawyers and even to students of civil law. Imbeciles often make improper and unjust wills.

DISEASES OF THE NERVOUS SYSTEM: a text book of Neurology and Psychiatry. By Smith Ely Jelliffe, M.D., Ph. D., Adjunct Professor of Diseases of the Mind and Nervous System, New York Post-Graduate Medical School and Hospital and William A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington, D. C.; Professor of Nervous and Mental Diseases, Georgetown University; Professor of Mental Diseases, George Washington University, and Lecturer on Psychiatry, U. S. Army and U. S. Navy Medical Schools. Octavo, 796 pages, with 331 engravings and 11 plates. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1915.

THE PRESENT STANDARD OF THE CARE AND TREATMENT IN STATE HOSPITALS.—By Dr. William Mabon, Medical Superintendent, Manhattan State Hospital, Ward's Island, New York. Read before the First State Conference on Mental Hygiene held in Albany, New York, March 23, 24, 25, 1915.—From Mental Hygiene Number of the State Hospital Bulletin for May, 1915.

This is a true showing of present day advance in recognition and care of insanity as a disease and the necessity, economy and philanthropy of taking adequate care of and giving adequate treatment to our insane and applies to existing hospitals for the mentally maimed in the United States.

REMOVING VISIBLE RESTRAINT FROM THE HARMLESS INSANE.—By Will H. Solle, Chicago, Ill. Reprint from the *Lancet-Clinic*, July 10, 1915. This is one of Dr. Solle's *Dementia Precox Studies* and is in line with the non-restraint system of the modern methods in vogue since the epochal reforms of the Pinel and Chiaruge. Invisible restraint precautions such as the substitution of strong secure screens concealed in various ways for jail-like iron bars, and numerous attendants instead of straight waists, recreation and attractive rooms supplanting monotonous, irksome confinement.

Psychiatry advances, as the paper shows, in the mind of the profession generally. The author favors the Gheel Belgium Colony system, now long in successful practice.

POWER OF WILL.—A practical companion book for unfoldment of selfhood, through direct personal culture, by Frank Channing Haddock, Ph.D., founder of the power book library, in five parts, forty-fifth edition, 1915. The Pelton Publishing Co., Meriden, Conn., is a power, in fact for stimulating the evolution of individual consciousness to vital education in the direction of strong, potent and cultured manhood and ambition to attain growth in self-culture and dominant will for right achievement.

Everybody who would be somebody might profit by its suggestion pertinent to successful growth of will in strength and right culture.

SIR W. R. GOWERS, M.D., F.R.C.P., F.R.S.—An appreciation by F. W. Langdon. Reprint from the *Lancet-Clinic*, August 14, 1915. This is a high and just tribute to our deceased English colleague in neurology and psychiatry. From a long personal acquaintance with the eminent author and physician we can verify much of the merited encomium. The deceased was in fact, as Dr. Langdon says "a star of the first magnitude" in the neurological firmament. But though obscured, his light has not gone out forever. It still illumines the literature.

REPORT OF CASE OF PEMPHIGUS IN A PARETIC
—By Max A. Bahr, M. D., and Fred'k. C. Potter, M. D.,
Central Indiana Hospital for the Insane. From *The Journal of Nervous and Mental Disease*. Read before
the Indianapolis Medical Society, October 20, 1914.

Of special interest from a differential point of view as to whether we are dealing with a case of simple, non-specific pemphigus occurring incidentally in a syphilitic, or whether the case is one of bullous syphilide of very late occurrence in an individual with an acquired syphilis, which is such an exceedingly rare condition that its existence is scarcely admitted by some authors.

This case is well written and well illustrated.

THE AMERICAN JOURNAL OF SOCIOLOGY for July is before us with a table of contents and selections of interest to the thoughtful and humanitarian sociologist. Dr. Alfred H. Lloyd of the University of Michigan contributes the initial original article on the Duplicity of Democracy. The Idea and Reality of Human Progress by Victor S. Yarros follows. A Study in Professional Deformation by Hubert Langerock is next, while The Evolution of Religion by Edward C. Hayes and Social Interpretation, by J. C. Bodin, conclude the index.

LES ACTUALITES MEDICALES. Diagnostic des Maladies de la Moelle.

This little volume contains a mine of neurological instruction by a neurologist of merit and renown. Dr. Grasset, as Professor of the Montpellier University Clinic, has ample opportunities for acquiring the requisite experience for writing such a book. The book is brief but accurate and practical, being confined only to the spinal marrow disease. J. B. Bailliere & Fils are the well known publishers, 19, Rue Hauteefeulls, Paris.

ELEVEN CASES ROENTGENOGRAPHIC AND OPERATIVE FINDINGS.—By A. Judson Quimby, M. D., New York City. Clinical Professor of Roentgenology, New York Polyclinic Medical School and Hospital, and Roentgenologist, New York Foundling Hospital, Etc., and William Seaman Bainbridge, A.M., Sc. D., M.D., New York City, Professor of Surgery, New York Polyclinic Medical School and Hospital. Read before the American Roentgen Ray Society.—From *American Journal of Roentgenology*.

COLLECTED PAPERS FROM THE RESEARCH LABORATORY, Parke, Davis & Co., Detroit, Mich. Dr. E. M. Houghton, Director. Reprints, Volume 3, 1915.

This is a valuable collection of practical laboratory findings for the physician in his practice. Some of the phenomena of the life history of the hog will prove especially interesting to the country general practitioner. Closson's researches will interest any physician. In fact, also the entire table of contents.

RETROBULBAR NEURITIS AS AN EXACT DIAGNOSTIC SIGN OF CERTAIN TUMORS AND ABSCESES IN THE FRONTAL LOBES.—By Foster Kennedy, M. D., Late Resident Medical Officer, National Hospital, Queen Square, London; Chief of Neurological Clinic and Instructor in Neurology, Cornell University Medical College.—From *American Journal of the Medical Sciences*.

OCCUPATION THERAPY.—A Manual for Nerves by William Rush Dunton, Jr., M. D., Philadelphia and London. W. B. Saunders Company, 1915.

This volume should prove of service in the entertainment (especially indoors) of convalescent patients in our hospitals and sanatoria and for private patients. We commend it to physicians and nurses.

A REVIEW OF THE THEORIES AND FACTS UNDERLYING THE TREATMENT OF DISEASE BY SOURED MILK CULTURES.—By Clement A. Penrose, M. D. Reprinted from Maryland Medical Journal, Baltimore, Md., March, 1915. Read before the Baltimore City Medical Society, January 8, 1915. A splendid resume of an important subject which should be read by every physician.

DEMENTIA PRECOX STUDIES.—The Adrenal Mydriasis of Dementia Praecox. By Bayard Holmes, M.D., Chicago. Reprint from the Chicago Medical Record, issue of July, 1915. Any new test leading to diagnosis or directing efforts toward research in this grave and too prevalent disease is most welcome, as the author says with force.

"THE DOCTOR" sent out free of charge to physicians as an advertisement of Peacock's Bromides and the Sultan remedies, Prunoids, etc., contains many judicious selections from the standard medical magazines.

The products of these well known firms are worthy of professional consideration as well as the selections adorning the pages of this little literary "Doctor."

MEYER'S THEORY OF THE PSYCHOGENIC ORIGIN OF DEMENTIA PRAECOX. A CRITICISM.—By E. Stanley Abbot, M. D., Assistant Physician, McLean Hospital, Waverley, Mass. Reprinted from American Journal of Insanity.

A PECULIAR UNDESCRIBED DISEASE OF THE NERVES OF THE CAUDA EQUINA.—By Foster Kennedy, M. D., and Charles A. Elsberg, M. D. With a Pathological Report by Charles I. Lambert, M. D. From the American Journal of the Medical Sciences.

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A STUDY OF LOCOMOTOR ATAXIA AND KINDRED DISEASES based on the treatment of 600 cases, by C. H. Burton, M.D., Medical Director of the West Side Sanitarium, Detroit, Mich; and Frank Burton, B. S., Member of the American Chemical Society. Illustrated.

ADDRESS IN MEDICINE before the Iowa State Medical Society, May, 14, 1914. Remarks on Some Ordinary Headaches. Hugh T. Patrick, M. D., Chicago, Illinois. From Journal of Iowa State Medical Society, November, 1914.

THE MODERN TREATMENT OF EPILEPSY.—By A. Ulrich, M.D., Director of The Swiss Institute for Epileptics, Zurich, Switzerland. From The Medical Times, Vol. XLIII, No. 4, P. 111, April, 1915.

MENTAL DISEASES AND CRIMINAL RESPONSIBILITY.—By Dr. James V. May, Medical Member of the New York State Hospital Commission, Albany, N. Y. From N. Y. State Hospitals Bulletin, November, 1912.

DEMENTIA PRECOX STUDIES. The Case for Dementia Precox as a Pluriglandular Disease. By Bayard Holmes, M.D., Chicago. From Chicago Medical Recorder, No. 3, March, 1915.

REVIEW OF KENT'S AND ROSANOFF'S "A STUDY OF ASSOCIATION IN INSANITY." Frederic Lyman Wells. From the Journal of Philosophy, Psychology and Scientific Methods.

THE SYMPTOMATOLOGY OF TEMPOROSPHEOIDAL TUMORS.—Foster Kennedy, M. D., New York. From the Archives of Internal Medicine.

SODIUM NUCLEATE. For the Induction of Artificial Leukocytosis in Dementia Praecox. By Bayard Holmes, M.D., Chicago, Illinois.

COMMON FACTORS IN MENTAL HEALTH AND ILLNESS.—Dr. F. Lyman Wells. From The Popular Science Monthly, Dec., 1914.

LA FORME ASTHENIQUE DE LA PARALYSIE GENERALE.—Par R. Benon et H. Cier, (Hospice General, Nantes.)

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INDEX

ORIGINAL CONTRIBUTIONS

A Contribution to the Study of Progressive Muscular Atrophy and a Report of Four Cases With Mental Disorders.....	215	Modesty Among the North American Indians	341
A New Theory of Kissing, Cunnilingus, and Fellatio.....	253	Notes on the History of Psychiatry..	365
A Report of the Clinical and Pathological Findings in a Case of Hystero-Epilepsia and Hystero-Epileptoid.....	231	Principles of Criminal Anthropology.	1
Alcoholism.....	247	Psychiatry in the Dietary.....	36
Athetosis	269	Rigidity of the Curriculum an Obstacle to the Progress of Medical Education.....	113
Cyst of the Lateral Ventricle.....	162	The Cigarette from a Medical Standpoint.....	372
Dementia Precox Studies. Adrenalin a New Diagnostic Test for Dementia Precox.....	449	The Colloidal Gold Test in Psychiatric Cases	396
Has There Been an Increase of Suicide Among the Opium Addicts Since the Passage of the Harrison Act, and if so Why?....	349	The Harrison Anti-Narcotic Law: Its Help and Its Harm.....	155
Heavenly Bridegrooms.....	434	The Mental Status of Roland P.	131
Is Genius a Sport, a Neurosis, or a Child Potentiality Developed?....	165	The Prevention of Mental Defect the Duty of the Hour.....	357
Is Genuis a Sport, a Neurosis, or a Child Potentiality Developed?....	236	The Propositions of the Association of Superintendents of American Hospitals for the Insane.....	45
Is Genius a Sport, a Neurosis, or a Child Potentiality Developed?....	384	Two Dreams.....	12
		What is Epilepsy?.....	7
		Ziehen's Conception of Acute Hallucinatory Paranoia (Amentia)....	414

SELECTIONS

NEUROSURGERY.		Exophthalmic Goitre.....	70
Choosing the Locns Operandi for Incurable Juvenility is a Puzzling Proposition.....	296	Health Commissioner Goldwater.....	465
NEUROTHERAPY.		Looking Backward on Scopolamine Anaesthesia.....	188
A Dysentery "Carrier".....	67	Nutritional Therapy.....	189
An Error Concerning Chloral-Hydrate Corrected.....	299	Pituitary Therapeutics, Etc.....	66
American Therapeutic Notes.....	68	Quinine vs. Hydrophobia.....	466
Before the British Medico-Psychological Association.....	67	Simple Sterilization of Water.....	71
Clinical Results with the Phylacogens Concerning Gastro-Intestinal Antisepsis	186	Studies in Prostatic Obstruction and Vesical Atony.....	301
Corpora Lutea Now Therapeutically Available.....	69	Successful Treatment of Tetanus Neonatorum.....	72
		Temperance 5500 Years Ago.....	465
		The Avitaminoses and Their Treatment.....	72
		The Fatigue Toxin and Immunity....	187

The Harmful Constituents of Roasted Coffee.....	71
The Intracranial Treatment of Paretic Dementia.....	299
The Potato as a Universal Aliment..	189
The Pumpkin as a Diuretic.....	69
The Rum Ration in the English Army.....	299
The Startling Statement.....	301
The Vitamine Dietary of Stassano....	187
Treatment of Diabetes in the Field..	300

NEUROTOXICOLOGY.

A Fatal Case of Veronal Poisoning..	63
Alcoholics and War.....	64
Hallucinations After Cocain.....	465
Inherited Defects from Alcohol.....	65
Killed by Wood Alcohol.....	64
The Telephone in Medical Practice..	184
Two Descriptive Cases.....	64

NEURODIAGNOSIS.

Sudden Death.....	59
The Technique of Psychoanalysis.....	462

NEUROPATHOLOGY.

The Blood in Epilepsy.....	464
The Cause and Control of Cancer....	185

CLINICAL PSYCHIATRY.

Insanity in Relation to Sex and Age	183
In sanity in Relation to Sex and Age....	463

Dangers to Attendants in Mental Wards.....	463
--	-----

CLINICAL NEUROLOGY.

Adolescent Insanity and National Health.....	467
A New Theory of Autoserotherapy.....	469
Dyspnea in Relation to Blood Reaction.....	468
Internal Secretions and the Psychoses	468
The Discovery of the Spirochaetes in the Brain.....	297
The Number and Kinds of Bacteria in City Dust.....	296
The Pituitary Body.....	183
Nervous Shock in War.....	298

NEUROPHYSIOLOGY.

Blood Threadlets.....	60
Dry Vegetable Cure in Diabetes Mellitus	304
It Should Be Noted.....	61
Pituitary Extract and the Salivary Secretion.....	461
Sajous' Recent Comments on the Ductless Glands.....	303
Venous Blood-Pressure	62

NEUROSYPMTOMATOLOGY.

Crossed Extensor Plantar Reflex.....	59
--------------------------------------	----

EDITORIALS

A Better Measure if Psychoneurone Stability.....	474
A Case of Hereditary Persistent Suicidal Impulse.....	83
Acquitting an Unfrocked Dissolute Inebriate Clergyman Murderer..	308
A Criminal Insane Hospital for Missouri.....	475
A Deliberate Murder for Fifty Cents..	471
A Military School Sold to Osteopaths.....	192
Among the Most Prominent Deceased St. Louis Physicians.....	80
An Alienist and Neurologist Subscriber Elected Governor.....	193
An International Commission de Lunatico Enquirendo	315

An Ordinance Providing for the Employment of Municipal Visiting Tuberculosis Nurses.....	306
Apropos of the Program.....	79
Apropos of the Student's Time Limit..	476
Between the Eugenists and the Anti-Race Suiciders.....	473
Birth Control for Cause.....	476
Candidates for Assistant Surgeon.....	75
Caution to Surgeons.....	77
Considerate Kindness to the Insane..	83
Correctness of Onomatology.....	475
Death of Doctor Clouston.....	311
Death of Dr. Jerome K. Bauduy.....	85
Detectives for Hospitals for the Insane.....	78
Diagnosis vs. Autopsy.....	479
Doctor Charles McIntire's Contribution on the Rigidity of the Medical Curriculum.....	199

Doctor Sajous' New Clinic in the Charity Hospital.....	309	The British Medico-Psychological Association.....	201
Doctors.....	79	The Carnegie Eugenic Commission..	84
Dr. Achilles Rose.....	84	The Chicago Medical Society.....	476
Dr. C. B. Burr.....	77	The Council on Medical Education of the A. M. A.....	203
Dr. G. W. Morrow.....	198	The Death of Doctor Carlos J. Finlay of Havana, Cuba.....	472
Dr. Shufeldt's (Maj. and Surg., U.S.A.) New Book.....	309	The Dual Source of the Cerebro- spinal Fluid.....	81
Dr. T. D. Crothers.....	474	The Dual Source of the Cerebro- spinal Fluid.....	198
Eccentricity vs. Insanity.....	314	The Eminent Alienist, Maragliano....	198
Erratum.....	79	The First Case of Opium Abstention Suicide.....	200
Fatalities from Sudden Morphia Deprivation in Chicago.....	307	The Harrison Bill.....	312
Freud's Method of Psychoanalytic Diagnosis.....	74	The Harrison Opium Coca Bill.....	200
Harry Thaw Again Free.....	317	The Honor of the Degree of LL.D....	312
Hemadenology.....	477	The Impeachment of Dr. C. R. Woodson.....	316
Ignorance in the Harrison Law.....	473	The Many Hospitals and Sanitariums	80
Inordinate Health-Harming City Noises.....	310	The Massachusetts Society for Mental Hygiene.....	477
Insane Murderers Acquitted.....	87	The National Committee for Mental Hygiene.....	193
Insanoids and Criminal Imbeciles at Large.....	473	The New Barnes Hospital.....	75
Internal Hydrocephalus.....	198	The Next (Seventy-First) Annual Meeting.....	193
It is Estimated.....	76	The Noisy, Rasping, Bouncing, Iron Wheeled Street Car.....	476
Les Mediciens Humanistes.....	84	The Object of the Visiting Nurse Association.....	195
Many Insane Hospital Reports.....	200	The Pan-American Medical Congress	194
Married School Teachers Should be Retained in Service.....	201	The Philadelphia Post-Graduate School of Neurology's Faculty....	76
Medical Officers of Hospitals for the Insane.....	196	The Practical Side of Masonic Work	202
Medically Enlightening the Public....	86	The Prayer of Medicine for More Laboratory Light.....	307
Not Clinically Correct but Start- lingly Untrue.....	316	The Prize Dissertation.....	77
Papine.....	82	The Psychiatry of Flowers in the Sick Room.....	197
Photaudiophobia.....	478	The Seventh Pan-American Congress	201
Physician's Tax Annulled.....	311	The Suspension of Gazzetta Medica Italiana.....	198
Prince Bismarck.....	78	The Trouble in Europe.....	475
Professor Johnson's Tuberculo-Pho- bic Suspender Investment.....	195	The Unregretted Summer School.....	313
Prosperous Grinnell College, Iowa....	198	The Unstably Brained Hazing Ruffian	478
Referring to Psychiatry in Mental Practice.....	478	Though Ehrlich Has Gone from Us....	477
Rheumatism and Rheumatoid In- sanity.....	82	Trained Men for State Institutions	75
Roland B. Molineux is Violently Insane.....	198	Trench Caused Insanity in the Bat- tle Area of Europe.....	79
Sanitation on the East Side Struck a Serious Obstacle.....	474	W. B. Kern, M. D.....	81
Since This is a Popular Non-Mon- archical Government.....	306	When the Great Malady.....	308
State Psychologist for Illinois.....	194	When You Write for this Magazine..	81
Surgeon General Gorgas.....	305	With the Privilege of Citizenship..	81
Taking Care of the By-Products.....	80	Why Not?.....	77
The Alienist and Neurologist.....	475	Why Should Secretary Daniel.....	306
The Alienist and Neurologist.....	79		
The American Academy of Medicine	196		
The Appropriation.....	80		

CORRESPONDENCE

Acute Heroin Poisoning and the Harrison Law.....	318	The Bravest Thing I Ever Did.....	88
Fatal Accidents Following the Injection of Antimeningitis Serum	90	The Maximum Mental Power Age of Man	482

OBITUARY

The Nestor of Kentucky Medicine	203
---------------------------------------	-----

IN MEMORIAM

A Memorial Monument	482	Sir William R. Gowers, M. D.....	318
---------------------------	-----	----------------------------------	-----

REVIEWS

A Case of Infantile Uterus Appendages with Result of Treatment.....	338	A Unique Case of Syphilis of the Cranium and Spine.....	212
A Case of Pure Psychic Epilepsy.....	212	Berger's Diagnosis of Cardio-Vascular Diseases.....	94
A Criticism of Psychoanalysis.....	111	Bulletin of St. Louis University.....	213
Actes du Congres Penitentiare International de Washington.....	110	Burgersdijk & Niermans.....	210
Acute Insular Sclerosis and Its Concomitant Visual Disturbances.....	339	Carnegie Endowment for International Peace.....	209
Acute Poliomyelitis.....	104	Choked to Death by Teeth.....	339
Address in Medicine.....	210	Christian Science Sentinel.....	208
Address in Medicine.....	493	Claims Arising from Results of Personal Injuries.....	109
American Public Health Problems.....	331	Clinical Symptomatology.....	209
America's Greatest Problem: the Negro.....	334	Collected Papers from the Research Laboratory.....	491
America's Leadership for Peace.....	336	Common Factors in Mental Health and Illness.....	340
America's Pressing Mortality Problem.....	336	Common Factors in Mental Health and Illness.....	494
An Earthquake of One Minute's Duration.....	336	Concerning Individual Differences in Reaction Times.....	106
An Epitome of the Diagnosis and Treatment of Nervous Diseases.....	108	Contributions from the Physiological Laboratory of the Medico-Chirurgical College.....	93
An Excellent Contribution.....	111	Curschmann-Burr Text Book on Nervous Diseases.....	325
Annali di Neurologia.....	212	Dementia Precox Studies.....	492
A Note on the Retention of Acquired Capacities.....	212	Dementia Precox Studies.....	493
A Peculiar Undescribed Disease of the Nerves of the Cauda Equina.....	492	Dental Electro-Therapeutics.....	212
A Plea for Simplified Laboratory Reports for Hospitals.....	336	Destitution and Disease in Serbia.....	324
Applied Eugenics.....	330	Diseases of the Nervous System.....	488
A Program of Practical Measures for Mental Hygiene Work.....	100	Dr. MacDonald's House.....	339
Archivos Brasileiros de Medicina.....	100	Dynamics Psychological.....	211
Archivos Brasileiros Psychiatria, Neurologia e Medicina Legal.....	107	Eleven Cases Roentgenographic and Operative Findings.....	491
Arequipa Sanatorium.....	337	Eugenics, Euthenics and Love—How They go Hand in Hand.....	207
A Review of the Theories and Facts Underlying the Treatment of Disease by Soured Milk Cultures.....	492	Experiments with Emulsions or Organs Taken from Dead Human Body and Sex-Glands of the Lower Animals.....	212
A Study of Locomotor Ataxia and Kindred Diseases.....	493	Extradition of Insane Persons.....	106

Falta's Ductless Glandular Diseases.....	483
From an Editorial on Gorgas.....	101
Fuller's Anatomical Models of the Brain, Pons and Medulla.....	329
Furor Caesareus.....	107
Great Men and How They are Pro- duced.....	331
Has the Old Man the Right to Live?	93
Hereditary Syphilis.....	340
Hobson's Arguments for Prohibition and an Adequate Navy.....	340
Human Plumbing—Amelioration and Cure of Chronic Intestinal Stas- is.....	211
Ictus, Epilepsie-Jacksonienne et As- theno-Manie.....	340
Ictus, Epilepsie Jacksonienne et As- theno-Manie.....	494
Implantation of the Generative Glands and its Therapeutic Pos- sibilities.....	96
Infantile Paralysis in Massachusetts	334
In Memoriam.....	327
Insanities of the Puerperal State.....	339
Istituto di Clinica della Malattie Nervose e Mentale e di Antro- pologia Criminale della.....	102
Instructions in the Proper Methods of Securing Tissues.....	111
International Clinic Week.....	209
In the St. Paul Medical Journal.....	333
Is There an Increase.....	106
Jahresbericht über die Leistungen und Fortschritte auf dem Ge- biete der Neurologie und Psy- chiatrie in Verbindung.....	102
Journal of Psycho-Asthenics.....	95
Laboratory Aids.....	111
"Laboratory Week".....	322
La Forme Asthenique de la Paralyse Generale.....	212
La Forme Asthenique de la Paralyse Generale.....	494
La Personalita del Giudicabile.....	211
L'Aphasie dans ses Rapports avec la Demence et les Vesanies.....	107
L'Enfance Anormale.....	485
Lcs Actualites Medicales.....	490
Les Dysthenies Periodiques.....	110
Les Pugues de L'enfance—Influence des Milieux Scolaires et Fami- liaux.....	337
Le Traitement des Stenoses Aigues du Larynx.....	109
Loss of Vitreous in the Intracapsular Cataract Operation and its Prevention.....	337
Medico-Psychological Assn. of Great Britain and Ireland.....	109

Mental Diseases and Criminal Re- sponsibility.....	493
Mental Medicine and Nursing.....	92
Mental Obliquities—How Caused and How Remedied.....	339
Mercurialized Serum, (Mulford).....	340
Meyer's Theory of the Psychogenic Origin of Dementia Praecox.....	492
Microphotographic Study of the Tubercle Bacillus.....	337
Mulford's Luetin Reaction.....	340
Narcotic Drug Addiction.....	339
Nervous and Mental Diseases.....	204
Neurosis and Purpose.....	109
Notes Sur Quelques Maladies Ner- veuses et Mentales Au Bresil....	109
Occupation Therapy.....	491
Oliver Wendell Holmes.....	320
One Hundred and First Annual Re- port of Trustees Massachusetts General Hospital.....	211
One Hundred and Seventeen Cases of Infantile Diarrhea.....	338
On the Formulation in Psychoanaly- sis.....	111
Power of Will.....	489
Present Status of Surgery of System- ic Goitre, Illustrative Cases.....	110
Proceedings of the American Medico- Psychological Association.....	336
Psychiatry.....	104
Psychic Therapy, Clinical Psycholo- gy, and the Layman Invasion....	338
Psychology in Daily Life.....	96
Radio-Activity.....	93
Removing Visible Restraint from the Harmless Insane.....	489
Report of Case of Pemphigus in a Paretic.....	490
Report to the Governor on the In- stitutions for the Insane.....	333
Report of the Director of Sanitation of Porto Rico.....	212
Retrolbulbar Neuritis as an Exact Diagnostic Sign of Certain Tumors and Abscesses in the Frontal Lobes.....	491
Review of Kent's and Rosanoff's "A Study of Association in In- sanity".....	493
Revue de Medicine.....	103
Revue des Sciences, Psychologiques, Etc.....	103
Revue des Sciences Psychologiques, Psychologie, Psychiatrie, Psych. Sociale, Methodologie.....	110
Science for December, 1914.....	103
Second Annual Report of the State Charities Commission.....	335

Sir W. R. Gowers.....	489	The Psychosis of Adolescence.....	110
Sixteenth Annual Report of the Board of Education.....	332	The Phylacogen Treatment of Pneu- monia	106
Sodium Nucleate.....	494	The Program of the Medico-Psy- chological Association.....	94
Solution and Remede.....	484	The Propaganda for Reform of the A. M. A.....	208
Some Important Memoranda.....	335	The Psychological Monographs.....	101
Spina Bifida.....	340	The Present Standard of the Care and Treatment in State Hospitals	488
Statistics of Public, Society and School Libraries.....	339	The Psychoanalytic Review.....	105
St. Louis Healthy.....	97	"The Red Man".....	97
Surgery of the Ileocecal Valve.....	98	The Schick Test, Illustrated.....	340
The Acid Test in Therapeutics.....	111	The Sei-I-Kwai Medical Journal.....	111
The Advantages of Medical Associa- tions.....	338	The Smith Indian Cataract Opera- tion in the Light of Scientific Investigation.....	211
The American Journal of Sociology.....	490	"The Story of Bethlehem Hospital".....	105
The Announcement of Memories of My Youth, 1844-1865.....	98	The Symptomatology of Temporo- sphenoidal Tumors.....	494
The Art of Companionship in Men- tal Nursing.....	108	The Systematic Observation of Per- sonality.....	107
The Art of Companionship in Men- tal Nursing.....	111	The Theory of Psychoanalysis.....	204
The Case of Belgium	109	The Treatment of Senile Cataract by the General Practitioner.....	338
The Certificate in Psychological Medicine	99	The University of Missouri Bulletin	335
The Chemistry of Neurasthenia.....	111	The Way to Vaccinate.....	111
The Commercial Lure of a Scientific Physiological Philosophy.....	329	The Wellcome Photographic Ex- posure Record.....	492
The Continuous Warm-Water Bath.....	109	Thirty-Ninth Annual Report.....	340
The Continuous Warm Water Bath the Rational Remedy in Tubercu- losis (Phymatiasis) and In- fectious Diseases in General.....	103	Thirty-Second Annual Report of the State Board of Health and Bureau of Vital Statistics of Missouri, 1914-1915.....	326
The Criminal Imbecile.....	487	Transactions of the College of Phy- sicians of Philadelphia.....	334
The Diseases of Personality: the Diseases of the Will and the Psychology of Attention.....	210	Trattato di Psichiatria.....	205
"The Doctor".....	492	Treatment of Drug Addiction and Alcoholism.....	212
The Effects of Goitre Operations Upon Mentality.....	108	Twelve Consecutive Intracapsular Cataract Operations and their Visual Results.....	337
The Extradition of Insane Persons.....	110	Vagabondage and Begging.....	108
The First Volume, Number I.....	486	Virginia State Epileptic Colony.....	111
The Hecht-Weinberg Reaction.....	110	Volume IX Publications of the American Sociological Society.....	328
The Intimate Relation of Orthope- dic Surgery to Neurology.....	108	Welfare Work.....	494
The Journal of Experimental Medi- cine.....	95	We Take Pleasure.....	487
The Laws of Heredity—Their Defi- nite Meaning and Interpreta- tion.....	206	What to do With the Sub-Normal Child.....	325
The Medical Organization of State Hospitals for the Insane.....	335	Where is the Fundus of the Bladder?	339
The Medical Pickwick.....	105	X-ray Studies.....	106
The Modern Treatment of Epilepsy.....	493	Zur Behandlung der Sexualen Neu- rasthenie.....	104
The Nervous System and its Con- servation.....	100		
The North Pole Aftermath.....	340		
The Onset of General Paralysis.....	485		
Two Perils to Good Government.....	332		



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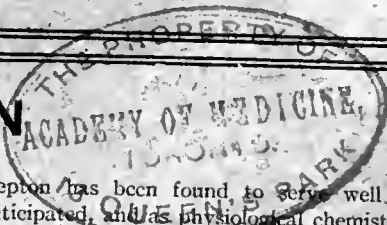
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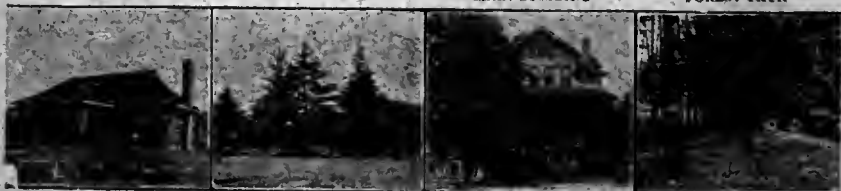
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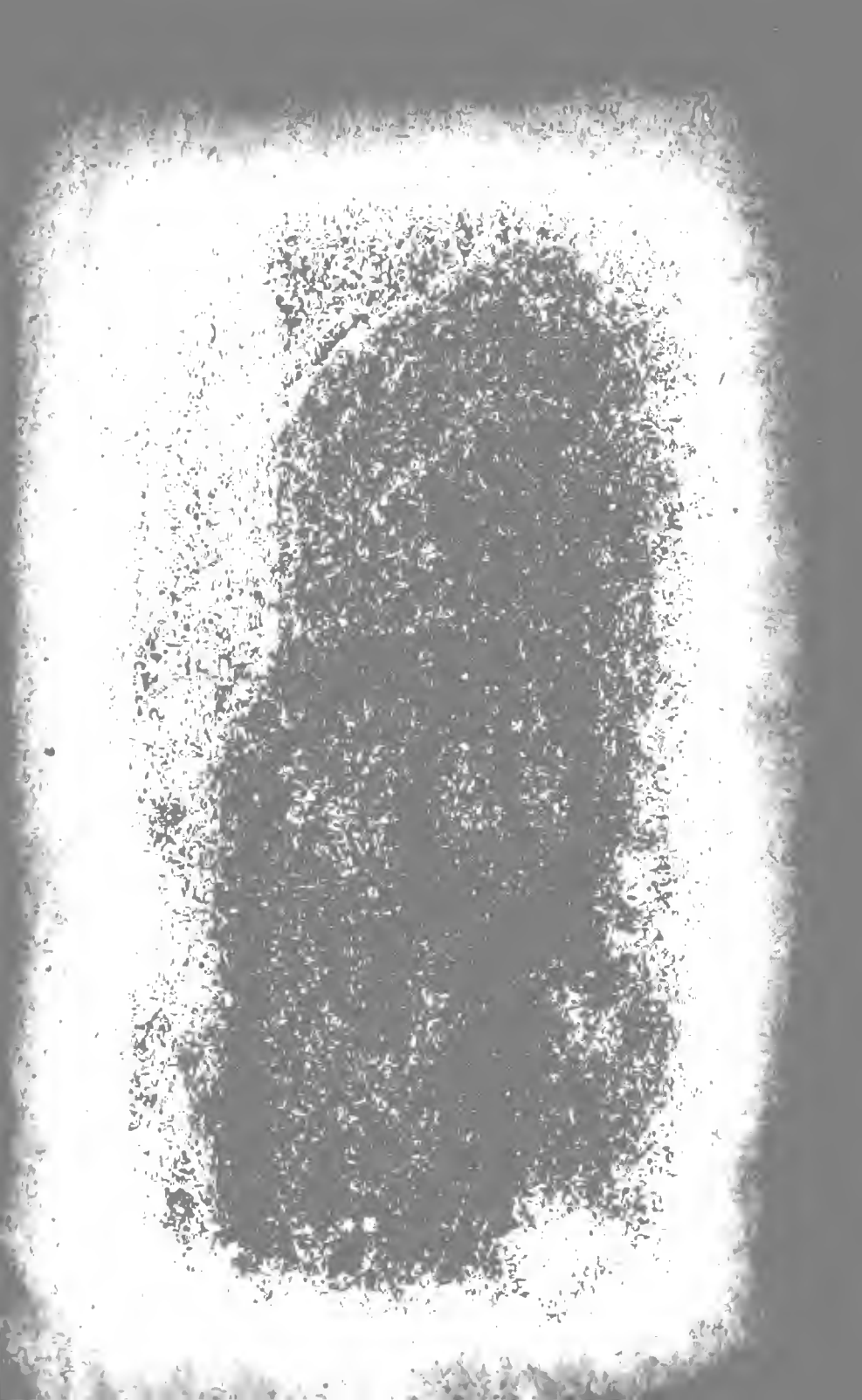
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